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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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THE NAVIES OF THE WORLD.

Sir Charles W. Dilke writes of "The Naval Strength of Nations," in the February Cosmopolitan, in an article on the navies of the world, intended to show the strong points of each and the lines of probable development. He believes that certain designs of Germany for interference in South America have not been without their effect in the recent naval development of the United States, but the growth of the latter in strength and population would be sufficient, without actual warlike preparation, to put an end to the risk of a war which would be as unpopular in Germany as war with Great Britain would be popular. Increase of the fleets of Germany and the United States has also been recommended by the consideration that they are countries of growing trade, that the German mercantile marine is advancing with remarkable rapidity, and that the United States in future wars may have to protect the neutrality of her commerce.

Japan and Russia have been expanding their fleets in opposition to each other, but the tremendous resources and population of Russia are so overwhelming that Japan must be worn down in the course of time. "I regard peace for the United States and for Japan, for opposite reasons as assured," this writer says, "and am convinced that Russia and Germany will not be called upon to use their navies until the time comes when they of themselves desire to do so against European foes."

He also believes that England's naval strength will not be tested in practice for a long time. "Until a coalition against us, which at the worst would probably be one of Germany, France and Russia—Italy and Japan waiting upon events and the United States being strictly neutral—should arise, which is probably a long way off, we are unlikely to see a first-class naval war."

Almost all authorities, this article says, rate the British ships very low. "In power of attack the Americans, Germans, Japanese, Russians, and French stand before the British. In power of defense, the French, the Americans, the Russians, the Italians, the Japanese and the Germans stand before the British. But in coal-endurance the British are easily the first."

The German ships are mostly of smaller type, and Germany has a special reason for building smaller battleships which is to be found in the shallowness of the waters on her coast. German ships are easily more lightly armed than are the battleships of the other Powers, but they are good, and Germany in the creation of her fleet has proceeded upon business lines and has obtained good value for her money.

"The Italian monsters were all out of date, but some new ones are now slowly being completed, of which the first, which is likely to prove one of the finest ships in the world, has just been launched. The Italians now carry what is virtually our big gun, but in their newest ships they are reducing the number from four to two. The United States is building some magnificent ships of a 14,650 or

15,000-ton class; the Georgia, Pennsylvania, New Jersey and two others. Of the American ships at sea, the Kearsarge and Kentucky are smaller, though with four very large guns and with a larger complement of men allowed to the Alabama, Illinois, and Wisconsin of the same class. The Maine, Ohio and Missouri are intermediate in size.

"The United States has the Brooklyn and New York, small ships as modern cruisers go, but that nation is building a large class of giant cruisers, the West Virginia, Nebraska, California, Maryland, Colorado, etc. The Brooklyn in her trials made nearly twenty-two knots. The new ships are intended to be twenty-two-knot ships."

The Japanese have attained, it is believed, the same success with their cruisers as with their battle-ships. Five Japanese armoured cruisers were launched in 1898 and 1899, built in all portions of the world. For combination of material, orderly arrangement and fighting courage the Japanese are unrivaled. We have yet, of course, to learn that their Admirals are equal to those of Germany, the United States, France or the United Kingdom.

The Germans have not done much in the way of great cruisers, and are supposed to rely upon using in war their remarkable passenger-ships, which British cruisers in any weather in any sea would find it hard indeed to catch. In fast cruisers Great Britain is behind. The French assert that the speed of their neighbors will also prove a knot behind paper speed. As to Great Britain's new armoured cruisers, their speed will be largely a matter of their boilers. The Powerful and the Terrible have, whatever the Admiralty may say, been failures; and it is hoped that England will succeed better with the water-tube boilers of the new cruisers. On the whole, commerce must still dread the fast merchant-ships to be employed against their sisters. Great Britain is very strong in destroyers, recognized as valuable general assistants to a fleet.

The French fleet has rapidly developed its building of submarines and submersible vessels. But this article says: "In some degree we must recognize the fact that in building submarine ships, which are cheap, the French are accepting the position of permanent inferiority at sea. They are a weapon of the weaker power. That the submarine will be a valuable engine of attack against our fleets on the high seas or at a distance from port, is improbable. It is certain that it makes close blockade of ports impossible, and watching dangerous; and it therefore hampers us in our operations as a superior naval power."

Sir Charles Dilke says in conclusion that "It may be taken as the general view of the best-informed that the British, Germans and French are admirable as regards both officers and men; that the American officers and the Japanese men leave nothing to be desired; and that the Russians and Italians are somewhat inferior; that the men of the American fleet vary a good deal, but that the best are admirable; and that the officers of Japan are still to some extent an unknown quantity although in their war with China they did well."

LAKE LEVELS.

The gauge records of the United States Lake Survey show the following mean stages of water for January, above mean sea level: Lake Superior 601.76 feet; Lakes Huron and Michigan 579.42 feet; and Lake Erie 571.17 feet.

These stages show Lake Superior to have been 0.46 foot lower than during the same month last year, and 0.18 foot lower than during January 1895. Lakes Huron and Michigan were 0.24 foot lower than during the same month last year, and 0.10 foot lower than during January 1895. Lake Erie was 0.27 foot lower than during same month last year, and 0.15 foot lower than during January 1895.

THE search for convenient ways of transportation by which the products of the Sudan may reach the outer world has called attention to a remarkable phenomenon of vegetable life on some of the head waters and tributaries of the Nile. This consists of enormous growths of papyrus and other plants, completely covering the streams and forming carpets of vegetation two or three feet thick, through which flows the water. Navigation by small boats is, of course, entirely interrupted by this obstruction, which is in places supplemented by vines and clinging plants, which arch the streams from bank to bank. Heavy floods occasionally sweep away the accumulations of plants, but they are quickly restored.—Youth's Companion.

THE SEASON'S TRAFFIC ON THE GREAT LAKES.

(Treasury Department—Bureau of Statistics.)

The calendar year of 1901 affords the first complete annual statement of the coastwise commerce of the Great Lakes. Previous years omitted the winter operations on Lake Michigan or gave figures only for individual ports. Figures for 1901 cover all the ports for the entire year wherever navigation was conducted. The season of open navigation by way of the St. Mary's Falls Canals, extended from April 26 to December 11, or a period of two hundred and thirty days. During this season, which in the Canadian canal was sixteen days longer, 28,403,065 net tons of freight passed through both channels on its way to or from the upper and lower lakes. During the season of 1900 a total of 25,643,073 tons was carried by way of both canals. There was consequently, a gain for 1901 of 2,759,992 tons, or 11 per cent. This does not include 10,100 cords of pulp wood and 9,000,000 feet of pine logs floated over the rapids and bound for lower lake ports. Registered tonnage for the season of 1901 was 24,626,976 tons, and that of 1900 was 22,315,834 tons. There passed through the canals in 1901 20,041 vessels, 14,372 of which were steamers, 4,482 sailing vessels, and 1,184 unregistered craft. With the exception of steamers, in which there was a slight decline compared with the preceding year, there was an increase of 589 vessels. A comparison of commodities shows that there was a gain in the movement of hard coal, flour, wheat, grain other than wheat, manufactured iron, salt, iron ore, lumber and general merchandise, and a loss in tonnage of building stone, copper, and soft coal.

A recapitulation of lake traffic shows the enormous volume of business done during the course of the year. The bulk of lake traffic is, however, confined to eight months of the open season. The figures for the entire year of 1901 show that there was received at the various lake ports 14,257,020 barrels of flour, 141,586,027 bushels of grain, and 9,205,764 net tons of coal; 20,792,699 gross tons of ore, copper and other minerals; 2,475,430,000 feet of lumber and logs, and 4,237,756 tons of unclassified freight. Taken as a whole, the year just closed has been one of the most prosperous in the history of lake navigation. Rates of freight have been remarkably remunerative, and yet in some respects lower than those of the two preceding years.

In comparing this summary's figures with other figures, it should be kept in mind that the former include only coastwise operations on the Great Lakes, whereas other figures, especially those made up for particular ports, include foreign lake traffic between American and Canadian ports. It is natural, therefore, that the figures prepared by local trade authorities should be somewhat higher than those covering only the domestic coastwise trade.

NOTICE OF HEARING.

Whereas, the Secretary of War has good reasons to believe that the bridge over Portage Lake, Mich., between Houghton and Hancock, Mich., is an unreasonable obstruction to free navigation of Portage Lake waterway, on account of the small width of draw openings.

It is proposed to require the following changes to be made in said bridge by the opening of navigation in 1903; work to be done during the winter of 1902-3, to-wit:

That the drawbridge should be rebuilt in accordance with plans presented by the Board of Supervisors of Houghton County, Mich., and approved by Secretary of War January 7, 1901, which plans provided for much greater width of draw openings and much greater facilities for navigation than now exist.

In order to give you an opportunity to be heard as required by the Act of Congress approved March 3, 1899, you are hereby notified that a hearing will be had before me at U. S. Engineer Office, third floor of National Bank Building, corner Sheldon and Isle Royal streets, in Houghton, Mich., at 10 o'clock a. m., on the 3d day of March, 1902, where and when you will be given an opportunity to be heard in the matter. As all the papers will be laid before the Secretary of War for his decision, it will perhaps best suit your purpose to submit in writing (in duplicate) whatever you may wish to present.

By authority of the Secretary of War:

D. D. GAILLARD,
Captain of Engineers, U. S. A.

U. S. Engineer Office,
Duluth, Minn., Feb. 15, 1902.



DETROIT.

Special Correspondence to The Marine Record:

The Port Huron Air Tool Co., Ltd., James L. Pilling, general agent, is now in shape for business and there are several important orders already booked ahead. Cranes, drills, hammers, riveters, hoists and punches are all made to work by compressed air.

The Detroit, Belle Isle & Windsor Ferry Co., has offered a prize of a \$10 gold piece and a season pass to Bois Blanc park, at the mouth of the Detroit river, to the person first sending in the name selected for the handsome new steamer which will be ready to go into service early in June.

An order for another big freighter has practically been placed with the West Bay City Ship Building Co.'s branch yard of the American Ship Building Co., the keel for which will be laid some time next month, or as soon as one of the three vessels on the stocks at the yard can be put into the water. This fifth steamer is to be smaller than the Etruria, which was launched last Saturday.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending February 18. Prevailing wind directions for the week, west; highest velocity, 27 miles from the northwest on the 18th; mean temperature for the week, 20 degrees; highest temperature 28 degrees on the 17th; lowest, 10 degrees on the 14th.

Capt. Duncan McLachlan, formerly of the City of the Straits, will be captain of the Eastern States, the first boat of the new line to be placed on the route between this port and Buffalo and Capt. John McCallum, pilot on the City of Cleveland last season, will be in command of the Western States. J. O. Snider is to be chief engineer of the Eastern States, D. C. Cummings, purser; Edward Pennell, steward.

In October, 1900, a collision occurred near Marine City between the steamer Sir William Siemens and the steam barge Swallow, in which the latter was severely damaged and sunk. Suit has been begun before Judge Swan, in the United States District Court, by the owners of the Swallow, who ask for \$13,500 damages. Gray & Gray and Moore & Goff are proctors for the libelants; Shaw, Warren, Cadv & Oakes, and H. A. Kelley, of Cleveland, for the respondent. The case will probably occupy the attention of the court during the remainder of this week.

It is learned that the insurance companies, at their coming meeting, are going to rule out all class B boats, and will not issue policies upon them. From the same source it was learned that the inspection for insurance purposes on all boats classed A2 and A2½ will be so severe that but few of them will be able to stand it, and will be placed in the B1 class, and no policies granted. This action, if it goes through, will have the effect of forcing about one-third of the present lumber carriers out of the business, as they will not be able to get cargoes so readily when no insurance can be secured upon the vessels.

The first practical test of wireless telegraphy on the Great Lakes are connecting rivers, was made from the steamer Promise, of the Detroit, Belle Isle & Windsor Ferry Co., on her trip to Wyandotte, to bring up the new White Star steamer Greyhound. The receiving instruments were in the pavilion of the ferry company at the foot of Woodward avenue. From the time the boat left the dock at 7 o'clock until she arrived at Wyandotte, a distance on an air line of about sixteen miles, communication was kept up at intervals of a few seconds. The condition of the ice, the boat's progress, etc., being regularly reported over the entire distance.

For some weeks past W. J. Brown, owner of the passenger steamer Pittsburg, has been negotiating with the management of the D. & C. line for the purchase of the steamer City of the Straits. Mr. Brown intended to run her on the up-shore and Georgian Bay route, in connection with the steamer Pittsburg, if he could secure her. The C. & B. line and D. & C. line are joint owners of the City of the Straits. The management of the former line, after considering the matter, decided it would be better not to sell the steamer but retain her, to be made use of by either of the lines now owning her, in case any emergency might arise in which one of the other steamers should be disabled.

"Captain," remarked the nuisance on shipboard who always asks foolish questions, "what is the object of throwing the anchor overboard?" "Young man," replied the old salt, "do you understand the theory of seismic disturbances? well, we throw the anchor overboard to keep the ocean from slipping away in a fog. See?"—Baltimore News.

CHICAGO.

Special Correspondence to The Marine Record:

It is said that the Hines Lumber Co. is in the field for several more boats to add to its already large fleet. Only a small difference now stands in the way of two such transfers.

Water will be let into the big new dock of the Shipowners' Drydock Co., this week. The largest boats able to navigate the Chicago river can then be docked in the north branch.

There is still a lot of negotiations under way for lumber carriers and several options are out which expire next week. It is believed there will be at least a half dozen ships added to the Chicago fleet by these deals.

Capt. W. H. Egan has purchased the holdings of the estate of the late R. F. Fitzgerald, of Milwaukee, in the steamers P. D. Armour, R. P. Fitzgerald, John Plankinton and W. M. Egan. Capt. Egan and the estate of the late P. D. Armour are now owners of this fleet.

J. Stanley Morton, of the Graham & Morton Transportation Co., of St. Joseph officially announced that navigation between St. Joseph and Chicago would begin March 1, providing repairs could be completed on the steamer Soo City, which will open the season. Otherwise the steamer Puritan will be put on the run.

Capt. Patrick Sullivan, for thirty years a resident of Chicago, died last Sunday of Bright's disease. He was fifty-nine years old, and for the last ten years has been connected with the city water cribs, being in charge of the Carter Harrison crib at the time of his death. Previous to that time he sailed on the lakes.

The Goodrich Transportation Co. has accepted the 1902 schedule and engineers in the employ of the company have been notified that they are at liberty to sign contracts which have been sanctioned by officers of the association. The carryover lines have exhibited no opposition to the association and it is probable that marine interests at this port will not be seriously inconvenienced.

It is now certain that both the Rutland Transit Co. and the Canada Atlantic Co. will continue their service to Chicago the same as in past years. The report that the Rutland line was to abandon the route between Chicago and Ogdensburg is now pronounced wholly in error, and the line will continue in operation with the same officials and with the same route as for many years past. Both lines, however, will abandon by agreement their offices near the Board of Trade, and will have their main offices here at the docks. This agreement was made before the Vanderbilts obtained a controlling interest in the respective companies.

"If the mines can produce it, and the facilities for forwarding iron ore in the lake region the present year will exceed 25,000,000 tons," W. L. Brown, president of the American Ship Building Co., said to-day. "The weak point is in the transportation facilities from the docks to the furnaces. The railroads have not enough cars and locomotives. Never in my long experience in the iron trade have I seen such a condition of affairs as exists today. The demand for material is such that the trade is actually congested. Corporations, which would seem to have the call for a supply of coke are running with half their furnaces idle, because the coke cannot be produced as it is required by the furnaces of the country."

Lake steamship companies and the railroads are engaged in a struggle over the payment of commissions, which is likely to sever the friendly relations that have hitherto existed between them. A meeting was held here last week at which were representatives of the passenger departments of nearly all the western and eastern lines and of all steamship lines. The railroad men insisted that the payment of commissions by steamship lines should cease and the threat was made that if it did not, the roads would withdraw their connection with the lake transportation companies. This would mean that the ticket officers throughout the country would throw out the tickets of lake lines and refuse to sell them. That this would be a severe blow to the lake lines is admitted. The general passenger agents, it is said, are standing firm on the proposition and assert that the payment of commissions must cease. Neither side thus far has given ground and the matter rests where it was previous to the meeting. The representatives of the lake lines insist as their season is short and competition is sharp, they must pay commissions or fail to get living business.

The leading lumber shippers who have been buying vessels since the close of navigation last fall are still in the market, and they are picking up some boats that have always carried ore. The Hines Lumber Co., of Chicago, which is one of the largest shippers on the lakes, yesterday closed a deal for the steamer Folsom, which was owned by the Mitchell Transportation Co., of Bay City. The Folsom was built in 1885. She is 180 feet keel and 33 feet beam and her gross tonnage is 940 tons. A deal for her consort, the Mary B. Mitchell, is on, and it will probably be closed this week. Nearly all the big shippers have added to their carrying capacity this winter and the outside owners of vessels of that class expect that the dealers will fix the opening rate at a fair figure. Some figuring for tonnage has been done during the past week, but no season contracts have been reported.

PORT HURON.

Special Correspondence to The Marine Record:

The Jenks Ship Building Co. of this city is one of the busiest industries in the state.

Actor Stephens was released from quarantine to-day, and so far as Port Huron is concerned, the small pox scare is disposed of, excepting, of course, the quarantine on the border.

Capt. W. C. Brown, of St. Clair, who has sailed the steamer Northland, has announced his resignation. It is not known what boat Capt. Brown will sail during the coming season.

E. C. Carleton is very much pleased over the signing of the contract for the construction of a canal from Lake Huron to Black river. Mr. Carleton claims to be the first man to suggest the enterprise.

Capt. Plow, of the Life Saving Station, is spending the day in Port Huron. Capt. Plow says the ice at the lower end of Lake Huron is solid and very thick, but occasionally he can see clear water from the station.

The ferry boats will quit running this evening, owing to the light passenger service. The announcement was made this afternoon that the boats would be taken off. The expense of running the boats is more than the receipts. The notice states that the boats will be taken off for a week.

Suit was commenced in the circuit court to-day, by McLane, Swift & Co. against the Botsford Elevator Co., for \$10,000. The plaintiff alleges that the elevator company had many thousand bushels of grain in the elevator at the time of the fire, which belonged to it, and \$10,000 is asked for. The plaintiff has its headquarters at Battle Creek.

The Jenks Ship Building Co., will place the Holly Hatch Clamp, on the steamer building for F. B. Cheesbrough, of Bay City. This vessel is intended for the Atlantic coast trade. An order has also been placed by the Columbia Iron Works for the Holly Hatch Clamps to go on the eight new steamers which they have contracted to build.

A great many questions have been asked in regard to the expense of the quarantine which is being maintained along the border to prevent the spread of small pox from Sarnia to this city. Dr. H. R. Mills stated this afternoon that the quarantine was under the direction of the United States marine hospital service, and the expense would be borne by the Government.

Capt. George Tebo, of Chicago, who is spending the week in Port Huron, says that his interview in the Detroit newspapers claiming that vessel captains should receive as large a salary as bank presidents, has attracted considerable attention. He is willing to bet a year's salary that if the average boat captain had been president of the City Savings bank of Detroit, Police Commissioner Andrews could never have drawn out a million dollars without his knowing it.

The Daily Herald learns from a Detroit source that H. B. Buckeridge has been appointed the local agent of the White Star line. Mr. Buckeridge, when seen, refused to talk, but the Herald has the very best reasons for believing that its information is correct. Mr. Buckeridge was agent of the White Star line for several years and was a live hustling representative, always keeping the line and its advantages strongly before the public, and the general feeling will be that the company could not have made a better choice.

One of the largest local verdicts ever rendered by a jury in a damage suit was brought in by the jury last night in the suit of Mrs. Nellie Young vs. the White Star line and Jane Smith, for \$15,000. The jury was out but a short time. In September of 1897 Mrs. Young fell through a defective hole in the dock at Algonac, and sustained serious injuries to her leg and spine. Physicians state that she will be permanently lame, and in her suit she asked for \$30,000. The case has been on trial all week. The company claimed that it was but the lessee of the dock and was not responsible for any damages for injuries. It is probable that an appeal will be taken to the supreme court.

LETTERS AT DETROIT MARINE POST OFFICE.

FEBRUARY 19, 1902.

To get any of these letters, addresses or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter giving the date of his list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Gunn C. B.	Reid Dan, Argonaut
Miller Wm R, M Duncan	Spencer Harry.
McKenzie Hugh, Hebard	Timothy James
Petee A S, Athens	White L E.

It is now learned that the deal by which W. C. Becker, of Cleveland, was to come into possession of the steamer W. H. Wolf, has been declared off. Mr. Becker purchased her subject to approval, and she did not exactly suit the purpose for which he wanted a vessel. He is therefore looking for another boat, and is now considering a proposition.

CLEVELAND.

Special Correspondence to The Marine Record.

A few days ago the announcement was sent out from Toledo, of the sale of the barge Crete. Since that time it has been learned that the new owners are W. C. Richardson and Capt. L. S. Sullivan, of Toledo. The barge came out in 1897, and measures 2,040 gross tons, and carries 3,500 tons. She went for \$6,500, and will be towed during the year by the Roumania. Capt. George Williams, of Oswego, was in command of the Crete last season.

It is learned that C. A. Morgan has accepted a position with the Pittsburg Coal Co., in the fuel department and will be with it during the year. Mr. Morgan is one of the best known marine men in the city. He was connected for several years with the Cleveland Tug Co., owned by L. P. & J. A. Smith, and at the same time was interested in their dredging plant. While manager of the tugs, he came into contact with most of the vessel owners and obtained a wide acquaintance.

A dispatch from Columbus says that the Advance Lumber Co., of Cleveland, capital stock \$225,000 has been incorporated. This is said to be a mere starter, and it is promised that the Advance will be one of the biggest lumber companies in the country. Yards are to be operated in all large cities and mills placed in Wisconsin, West Virginia, Kentucky and Alabama. It is said M. E. Christy, of Buffalo, and of the Kirk-Christy Lumber Co., of Cleveland, will be the president of the company.

Messrs. Pickands, Mather & Co. will hereafter look after the handling of the coal moved by the Sunday Creek Coal Co. from the Hocking district. The product of that company's mines is sent forward from Toledo and will amount to about 1,500,000 tons during the coming season. This, with the coal the local firm ships from the Pittsburg district, will make them the largest shippers in the business outside the trust. Nothing has been done in coal freights and very little attention has been given the matter by either the vesselmen or shippers.

Harbormaster Lynch is notifying all the vessel owners and masters of vessels tied up in the main river to fasten their boats more securely, as a freshet may be expected in the near future. The lumber dealers of the flats sent a request to Mayor Johnson, asking that several vessels be removed from close proximity to the bridges, and that the fire tugs and tugs of the Great Lakes Towing Co., be located at advantageous points so as to be available in case of any ice gorge. Capt. Lynch says that the reason that more fastenings are required is because of the rotten condition of some of the wharves.

The Corrigan Transit Co. got a judgment for \$10,434.66 against the Chicago Insurance Co., on Thursday last, from a jury in Judge Disette's court. The verdict knocks out the ice clause in marine insurance. Capt. James Corrigan lost a barge, the Northwest, while she was being towed through the Straits of Mackinaw, a large ice floe striking her. The insurance company put up as defense that there could be no claim for damages from ice unless the boat was protected by special plating. The jury does not seem to have agreed with them in this.

Before leaving for the South, J. C. Gilchrist closed a deal whereby he purchased the barges Tyrone and Antrim, but the price paid is not told. The purchase was from Drake & Maytham, of Buffalo. The boats are medium-sized craft, the kind that are in most demand this year, being able to carry about 4,000 tons each. The Tyrone was built at the old Globe yard of the American Ship Building Co., in 1897, and has a gross tonnage of 2,117 tons. The Antrim was built at the same yard in 1895, and measures 3,200 gross tons. The two boats give Mr. Gilchrist probably the largest independent fleet, so called, on the chain of lakes.

The meeting of the coal men, which was to have been held in Cleveland the latter part of last week, to fix on the price of coal that is to be sold in the Northwest this year, will be held this week. This meeting, it is expected, will last through two or three days, and it is altogether possible that some of the new factors in the situation may make some changes from what was originally planned to be the result, namely, the assessing of a better price for the coal to be sold. Following this meeting the coal shippers, as soon as they have sold their coal, will be in position to fix the rate of carriage, upon which one of the liveliest contests of years is expected.

The steamer Minnetonka, which is being built at the Old Globe shipyard of the American Ship Building Co., for service on the Atlantic, and which was launched a short time ago, has been cut in two in one of the drydocks, and her bulkheads have about been adjusted into the halves of the boat. She will be taken out of the dock in a few days, and will then be ready for removal to the coast. It is expected that her sister ship, which is submitting to a similar operation, will likewise be ready in a comparatively short time. When this work has been done on the two steamers mentioned they will be sent to the coast immediately upon the opening of the season of navigation.

A short time ago Major Kingman, Corps of Engineers, U. S. A., engineer of rivers and harbors in this district, framed a set of rules to govern the swinging of the bridges

over the Cuyahoga river. He submitted them to the railroads, to the city officials, to the vessel owners, and the masters of lake steamers for their approval, or for suggestions of changes. At the same time he appointed a time when all interested might meet and discuss the rules. All interested will be given a chance to say what they have to say at the hearing which is to be held in the library of the Chamber of Commerce, on Friday morning. At this time Major Kingman will preside at the meeting to be held, and the result of the hearing will be the recommendation of the Secretary of War as to the rules. Whatever the Secretary decrees after this hearing will have the force of laws, the violation of which will be punishable by a very heavy fine.

When the season of navigation opens this spring there will be no channels to important ore receiving or coal loading ports in the Cuyahoga district which will be obstructed by a bar across their mouths. Maj. Kingman has provided against that matter with characteristic energy and forethought. He recently applied to the authorities at Washington for the privilege to advertise for bids from the dredging concerns to remove the bars which habitually form during the winter at Ashtabula, Fairport, and Conneaut. Permission has been obtained to do this work. Major Kingman has promised the dredging companies that there shall be at least 10,000 yards of material to dredge away, thus making it worth their while to bid, while it is possible that some of the bars may amount to 15,000 yards. At any rate, as soon as the ice is out of the various harbors the dredgers will start to work and will make the channels clean cut and of universal depth.

BUFFALO.

Special Correspondence to The Marine Record.

Adam Hartman, of Tonawanda, has bought the remaining half of the schooner Saveland of C. H. Ripson of Oswego. The Holland syndicate, to which Capt Hartman belongs, owns half of the Saveland. She has been obtained in order to tow behind the steamer Kittie Forbes with the Brunette.

John J. Boland, the vessel broker, has been selected to confer with the lumber-shovers' union in conjunction with Chairman Alfred Baines, of the Lumber Exchange, on the question of lumber handling from barges. This port is badly handicapped by high charges, which are from one to two shillings more than Tonawanda pays. The plan to deal with the union direct, as other ports do, is gaining strength.

The steamer Nottingham, the third of a fleet of five building for the United States Navigation Co., will be launched at the Buffalo yard of the American Ship Building Co. during the next week. She will be sailed by Capt. C. D. Woodward, who has sailed the steamer George Presley for a number of seasons. The new ship will be completed and ready for business by the opening of navigation.

A special from Ottawa says that Col. Hughes, M. P., will move in the House of Commons to-morrow for a commission to report upon the division of waters between Canada and the United States, and to investigate the conditions, rise and fall, etc., of the waters adjacent to the boundary line between Canada and the United States including all waters of lakes and rivers whose waters flow by the St. Lawrence river to the Atlantic ocean.

There is an immense body of ice in the harbor here. Although the fireboats have kept the channel open there is so much ice forming that it shoves under the broken parts, and is said to be fairly on the bottom, especially at the Blackwell, where the tugs cannot now tow a vessel. The trust has two tugs under steam, and is preparing to steam up two more, as Manager Vroman is afraid that there will be a bad freshet as soon as the warmer weather sets in, and he wants to be ready for it. The opposition line also has one tug ready.

Strong support for the canal bill calling for the expenditure of \$28,000,000 in the enlargement and improvement of the Erie Canal, was mustered at the hearing given this afternoon by the Canal committee of the Senate. Delegations from leading commerce and trade organizations from all sections of the state were present to urge legislation on the canal proposition as outlined in the message of Governor Odell. Despite the report that there would be no canal legislation this year, the canal advocates were enthusiastic today, and after the hearing, many of them expressed their firm belief that the proposition would go through. Henry B. Herbert, of the Canal Association of Greater New York, seemed to voice the sentiments of all in favor of the enlargement of the canals when he said to the committee: "The Governor's proposition or nothing; \$28,000,000 for canals and not one cent less." A feature of the hearing was the presentation of a letter to the Canal Committee from Andrew Carnegie, in which he strongly advocated the improvement of canals. The arguments against the canal proposition were presented by Senator Ambler, who believes in Federal control of the State waterways, and who introduced the concurrent resolution proposing an amendment to the Constitution permitting the sale or lease of the canals.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record.

A. Booth Co. have purchased the steamer America, a fast and commodious steel freight and passenger steamer, to ply between Duluth and Port Arthur and Isle Royale next summer. The America is a comparatively new boat. This will be her third season. She was built by the Detroit Dry Dock Co. as an excursion boat, and she was operated as such last season between Buffalo and Niagara Falls.

Capt. F. A. Fick has been appointed to the command of the second steamer building at West Superior for G. A. Tomlinson, of Duluth, which will be named Senora. Capt. Fick has followed the lakes since he was eleven years old. His first command was the steamer Henry Howard. For twelve years after that he was master of a number of river tugs. In 1881 he was appointed master of the steamer Alcona.

It is now reported that Capt. W. H. Singer, of the White Line Transportation Co., is negotiating for the purchase of the steamer Chippewa, now on Lake Michigan, to run between Duluth and Port Arthur and Isle Royale. She is a very fine freight and passenger boat, and is speedy. It is known that Capt. Singer is negotiating for a boat of this kind to run out of Duluth, but it could not be confirmed that it is the Chippewa.

All of the commercial bituminous coal at the head of the lakes is exhausted and that which remains on the docks belongs to the railroads. The coal managers have been telling of the shortage of soft coal, but many consumers thought that the conditions were exaggerated. At least they thought that the shortage would not be acute before March 1 or 15. But the end of the supplies of soft commercial coal has arrived and the railroads, always forehanded in providing for their own wants, control all that remains.

Since A. B. Wolvin and the harbor board of Quebec got together to talk business about a terminal there for the new lake and ocean line, the harbor board of Montreal has awakened to the situation. Formerly they were a little backward about helping Mr. Wolvin out, acting upon the advice of Minister Tarte, who said that Canada could float her own enterprises. The Montreal board has now appealed to Mr. Wolvin to establish his terminal there, and has also offered him the site he wanted before for the elevator. Mr. Wolvin has made the reply that he is now negotiating with the people of Quebec and sees no reason why he should change his plans, inasmuch as that city seems to be alive to the situation and to mean business.

Capt. D. D. Gaillard, United States engineer in charge of government improvements on Lake Superior, who has been in Washington to appear before the rivers and harbors committee, has returned. His presence was desired to go over the present proposed work for Lake Superior for the coming season. Capt. Gaillard says: "Congressman Morris and I appeared on two occasions before the committee in connection with matters connected with improvements for the Duluth-Superior harbor. I was given a thorough hearing and we went over all improvements on this lake. I met Congressman Jenkins, in whose district Superior is situated and talked with him also in reference to the head of the lake improvements. Congressman Morris is a very busy man and painstaking representative."

The Licensed Tugmen's Protective Association, of Portage Lake, held a meeting recently, when the schedule of wages was made out for the coming season. The national association deviated from the ordinary custom this year, and allowed the local association to make the scale. The schedule which will be in effect for this year, is as follows: Dredge and outside tugs—Captains, \$115; engineers, \$100. Inside tugs, classed as harbor tugs, ferry boats or yachts—Captains, \$100; engineers, \$105. Fish tugs—Captains, \$100; engineers, \$100. Vessel towing tugs—Captains, \$125; engineers, \$105. Mates on outside boats and dredge tugs, \$70; engineers, \$70. This scale of wages is practically the same as that made by the Duluth union. The association includes in its membership nearly all of the tug men on Portage Lake.

The last great body of white pine for sale in Wisconsin, and the last in the market with the exception of one on the north shore, that is tributary to the mills of the Duluth-Superior harbor, or Ashland, has just passed into the hands of the Edward Hines Lumber Co., of Chicago, now said to be the biggest lumber operators in the United States. The tract referred to is situated eight or ten miles south of South Superior, and lies to the east of Dedham, on the Eastern Minnesota road. It was owned by Messrs. Weyerhaeuser and Sauntry, and was sold for \$2,000,000. There are about 300,000,000 feet of pine in the tract, and fully 95 per cent. is of the white variety. It is said to be the greatest and finest body of this timber in the Northwest, and it will be manufactured at the head of the lakes. It was reported a few weeks ago that the Clark-Jackson Lumber Co. had purchased it, and negotiations were in fact, in progress, but now it is reliably stated that the big Chicago concern has secured the pine. The price per thousand feet was about \$7. It is understood that the aggregate consideration was something more than \$2,000,000. The character of the pine may be understood from the fact that the bulk of the timber will cut from two to eight logs to the thousand.

FRENCH MERCANTILE MARINE.

The London Engineer calls attention to the decadence of the mercantile marine of France as one of the most serious economic problems of that country, and one that is attracting the attention of the French people. From being one of the leading sea-carriers of the world, France now finds herself a long way down on the list, below even Norway and Sweden. Gallic political economists fear that the marine will undergo an utter extinction unless something is speedily done to give it encouragement. This decadence means the impoverishment of the country by the payment of huge sums for freight to foreign vessels; and diminishes the ranks of seamen from which France draws men for the fighting navy. The lowest estimates put the amount paid to foreign shipowners every year for freight at 300,000,000f., and the amount paid to French owners is 100,000,000f., so that three-fourths at least of the French seaborne traffic is in the hands of foreigners.

As to the cause of this disastrous decline in the French carrying trade, it must be remembered that the class of goods exported is not of large bulk. Shipments consist chiefly of high-priced articles not of sufficient bulk to permit vessels being specially freighted, and the goods are nearly all taken by foreign vessels which call at the French ports. The foreign owner can leave his own port with a two-thirds cargo, and make up the rest in France, while the French vessel could not sail unless she got a sufficiently profitable freight at home. Many suggestions have been made for facilitating making up of freight for the benefit of French ships. It is argued that the merchandise is distributed among too many ports; and that if it were concentrated among a few, the owner would have no difficulty in getting all the freight he wanted. Preferential charges should also be allowed on the railways, and the waterways should be utilized to better advantage; but these proposals are outside the range of practical politics, and no system of distribution will enable the French shipowner to secure freight if he cannot offer better conditions than his foreign competitor.

No less serious are the legislative drawbacks under which the mercantile marine labors. The protective system has been carried to the extent of hedging the owner round with all sorts of restrictions, of which the primary object is to make the mercantile marine a school for naval seamen.

Every crew must be composed of at least three-fourth Frenchmen, and the owner is bound to bring the men back to the port of departure. Neither for these economical or legislative difficulties is there any remedy. The French Government cannot provide the ships with freight, and will not change a law regarded as of the first importance from the point of view of national defence. It therefore instituted a system of premiums or bounties around which a parliamentary battle has been waged.

The obstacle in the way of legislative measures for the revival of the mercantile marine lies in the difficulty of conciliating the interests of the shipbuilder and the shipowner. The builder aims at prohibiting the importation of foreign vessels. The owner objects to paying high prices for home-built ships, and regards the system as absolutely ruinous, as business is unprofitable unless he can procure vessels at a reasonable cost. He is paid a navigation bounty for vessels of French construction; but so arranged that the bulk of it goes into the pockets of the builders. A former half bounty on foreign-built ships imposed in 1881, was suppressed in 1891, owing to the opposition of the builders to its renewal, and the navigation premium was fixed in 1893 at 1.70f. per gross ton per thousand miles for sailing ships, and at 1.10f. for steamers. The builders thus got their monopoly. But, as a result, the owner was utterly unable to purchase his vessels at home, and found it preferable to pick up bargains in the way of old ships in England, even if he had to forego the navigation premium.

Since the suppression of the half bounty the steamers of foreign construction have totaled 20,694 tons a year, with an average age of fifteen years, whereas the yearly tonnage of steamers built in France is 8,735 tons, 42 per cent. of foreign vessels, as compared with 83 per cent. during the period when the half bounty was in operation. And the mercantile fleet has been converted into a wonderful collection of old slow-going tramps, known as "wolves," owing to their insatiable appetite for fuel. The suppression of the half bounty had another unexpected result.

The owner saw that with the highest premiums offered he had every advantage in purchasing sailing vessels, which had the further merit of being cheaper and more economical, and thus a number of small companies sprang into existence to acquire two or three sailing ships that became known as "premium hunters" because they were merely run for the navigating bounties. The building of sailing ships has gone on so rapidly that in 1899 and 1900 they represented 80 per cent. of the entire French construction. The sailing vessels did not take any freight from French ports, but relied on bulky merchandise, such as grain and coal transported between England and Russia and America. Many small companies own sailing ships which are paying dividends of between 20 and 30 per cent. with the aid of the navigation bounties. The existing legislation has, therefore, merely profited the owners of sailing ships and the builders, the former being able to cut freights to a ruinous extent, since it would almost pay them to sail all the year round on ballast; but it has proved disastrous for the

mercantile marine, and the proportion of French freight it carries is actually smaller than it was before the abrogation of the old law.

The Government has been obliged to bring in a bill to favor shipowners by the payment of a bounty on foreign vessels, and to reorganize the navigation premiums. No measure has met with more violent opposition in the Chamber of Deputies. The shipbuilding interests attacked every clause of the bill, and nearly succeeded in defeating it. They argued that it would let in British vessels to the prejudice of the home industry, that French capital was giving employment to the British shipyards, while the French workmen were unable to make a living. Unfortunately for the shipbuilders, the Government was able to show that while the number of stocks had nearly doubled in ten years, the industry was utterly unable, or perhaps unwilling, to carry out private orders. Builders preferred to rely on state contracts, for which they were more highly paid. So violent was the attack that the Chamber of Deputies was actually surprised into voting the total suppression of bounties on vessels of foreign construction, but the Government followed up with a rider which entirely reversed the amendment.

The argument in favor of the bounty is that if traffic is to develop there must be more ships, and more facilities for procuring them, while the home shipbuilding industry must naturally profit from the revival of the mercantile marine, as well in the carrying out of repairs as in supplying the demand for new vessels. If owners of foreign-built vessels spend more than a certain amount abroad upon repairs, they will lose the benefit of the "compensation." With a view of conciliating the shipbuilding interest the bounty is hedged with much greater restrictions than under the law of 1881. Compensation is limited to shipping companies of which three-fourths of the directors are French, and the ships must be manned and navigated by Frenchmen. The amount of bounty to be paid is five centimes a gross ton up to 1,000 tons, with a diminution of one centime for each additional 1,000 tons, until the sum paid for more than 4,000 tons is two centimes a ton.

This small sum does not represent any considerable advantage for the buyer of a foreign vessel over the owner who receives the full navigation premium on French-built ships, but he gets at the same time a reduction of the import duties to the nominal figure of 2f. a ton for "statistical taxes," so that the net result may be expected to compensate the owner for the higher prices asked by the home shipbuilding firms. The shipbuilding interest tried to reduce the age of the foreign vessels imported from seven years to five, to require them to sail a minimum speed of ten knots an hour, and to compel the owner, when he purchased a vessel abroad, to place an order for a similar tonnage at the French shipyards. Admiral Rieunier pleaded in favor of taxing foreign vessels which carried off the French freights as if they were engaged in a discreditable and illicit traffic, quite overlooking the fact that the French "premium hunters" have been doing exactly the same thing in foreign ports. All these amendments were rejected. The old arrangement of premiums favorable to the construction of sailing ships, has now been modified. The 1.70f. a ton is to be maintained for sailing vessels of less than 800 tons but, it is to be decreased in inverse ratio to an augmentation of gross tonnage, until the minimum figure of 1f. is reached. The premium on steamers, on the other hand, has been increased from 1.10f. a ton per thousand miles to 1.70f. Moreover an important restriction now comes into force limiting the tonnage upon which premiums can be paid in any year to 500,000 tons for steamers and 100,000 tons for sailing vessels.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade February 15.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BA LEY Bushels
Buffalo	3,665,000	484,000	384,000	3,000	817,000
" afloat	361,000	84,000			
Chicago	6,705,000	4,508,000	494,000	1,045,000	179,000
" afloat	417,000			77,000	
Detroit	376,000	199,000	38,000	113,000	22,000
Duluth	11,132,000	175,000	182,000	455,000	293,000
" afloat	511,000				
Fort William, Ont.	4,575,000				
Milwaukee	68,000	161,000	381,000	35,000	201,000
Port Arthur, Ont.	250,000				
Toledo	54,000	98,000	528,000	187,000	
Toronto	70,000		15,000		61,000
On Canals	46,000	3,000	112,000	37,000	50,000
Grand Total	55,406,000	11,132,000	4,290,000	2,283,000	2,145,000
Corresponding Date, 1900	57,682,000	17,061,000	10,372,000	1,174,000	1,669,000
Increase for week					250,000
Decrease "	1,160,000	448,000	126,000	72,000	

While the stock of grain at lake ports only is here given, the total shows the figure for the entire country except the Pacific Slope.

The Craig Ship Building Co., with an authorized capital of \$1,250,000 was incorporated at Trenton, N. J., on Jan. 17, with authority to construct and operate vessels of all kinds. The incorporators are Cleveland V. Childs, Jas. R. Mapletoft, H. N. Smith, all of East Orange, N. J.

NOTES.

THE Buckeye Fish Co., of Cleveland, has bought 250 feet of dock frontage from the Menominee River Lumber Co., of Menominee and will erect a big fish canning factory, to cost \$30,000. The new factory will employ 150 men the whole year. The Buckeye Co. will also erect a large fertilizing establishment, and manufacture fertilizer from fish offal. The company has already purchased two tugs and will have a fleet of small sailing vessels.

THE submarine boat Plunger, built at the Crescent Ship yards, at Elizabethport, N. J., was successfully launched on February 1. Mrs. Myron T. Herrick, the wife of Col. Herrick, of Cleveland, christened the boat. After the launching, Mr. and Mrs. Nixon entertained the guests at luncheon in the offices of the shipyards. Among those present were Col. and Mrs. Myron T. Herrick, of Cleveland; Naval Constructor, Lawrence Spear, U. S. N.; Lieut. W. C. Herbert, U. S. N., and Lieut. Commander W. P. White, U. S. N. The Plunger is a sister ship of the Adder, the Moccasin, the Porpoise, the Shark and the Fulton, which were built by Mr. Nixon and will shortly be placed in commission. The vessel will have a speed on the surface of about eight knots, and a radius of action of about five hundred miles. The submerged speed will be about seven knots, with a radius of about forty miles. She will carry a crew of seven men when equipped and ready for service. The armament will consist of one torpedo tube, and the vessel will carry three of the new long Whitehead torpedoes.

WHAT may happen when more than two sets of wireless telegraph apparatus are being used within range of each other was indicated on Saturday last, when Geo. Kronche, the operator on the Kaiser Wilhelm der Grosse, tried to communicate with Mr. Henworth, the operator on the outgoing Lucania, and the operator on the yacht Hohenzollern tried to invite Kronche to visit the yacht at 4 o'clock. The operators on the two steamships were communicating in English, while the operator on the yacht spelled his message out in German. Sandwiched in between the words of the Lucania's messages on the tapes were occasional German words. At last came from Mr. Henworth the message: "Don't talk German, I don't understand it." This puzzled Mr. Kronche, for he was telegraphing in English. Running his eyes along the tape on his machine he picked out the German words, and stringing them together found that, translated into English they read: "Come over and see me at 4 o'clock." It was a message from the Hohenzollern. Communication was maintained between the two steamships for two hours and a half.

WITH the constant and rapid increase of improved machinery in use on vessels of all kinds, those who get out annual catalogues and calendars find it no easy task to keep abreast of the times in clearly defined illustrations and type descriptive of their manufacture. The American Ship Windlass Co., of Providence, R. I., are never excelled in this work. Ever since its establishment, in 1857, this company's catalogues and circulars have been an excellent production of the artist's and printer's work, while the articles descriptive of their windlasses, capstans, towing machines, wharf drops, hawespipe stoppers, etc., are always carefully, intelligently and explicitly composed. This company's catalogue for 1902 is especially attractive. There are between its covers 283 pages, on which are 114 cuts representing every device which the American Ship Windlass Co. manufactures, including those for which they are agents. Each cut is numbered, so that those contemplating ordering from this catalogue have only to refer to its number. A careful study of this catalogue, which can be had upon application, will convince anyone that the "Providence" machines are designed on strictly mechanical principles, and that their materials and workmanship are of a superior order, and that they perform with perfection, the work for which they were designed.

REAR Admiral Bowles, Chief of the Bureau of Construction and Repair, was given a hearing by the House Committee on Naval Affairs, February 4, which he devoted entirely to a discussion of the advisability of building vessels for the Navy at Government yards. Admiral Bowles favors the construction at Government yards of very small vessels, although at a greater expense to the Government, in order that the yards may be kept fitted with appliances necessary to the keeping of all vessels in repair. He does not look with favor upon the construction at government yards of any of the vessels of the larger types. Only very small cruisers and gunboats could, he thinks, be advantageously built at government yards. In support of his contention that it would cost the government for more to build vessels at Navy Yards, Admiral Bowles quoted statistics showing that the employees of the government receive 40 per cent higher wages than those at private yards and that they are given seven holidays and fifteen days' leave of absence not allowed employees of private shipbuilding concerns. As a result, the Admiral stated, each year costs the government an immense amount of money, and he recommended that either the holidays and leave be discontinued or that the yards be entirely shut down for fifteen days in January so that all the men would take their leave at the same time. He said that it would cost the government \$180,000 to put the New York Navy Yard in order to build ships, and called attention to the fact that material and supplies could not be obtained by the government as cheaply as by private concerns.

AMENDED STEAMBOAT RULES AND REGULATIONS.

TREASURY DEPARTMENT,
STEAMBOAT-INSPECTION SERVICE,
OFFICE OF SUPERVISOR-INSPECTOR-GENERAL,
WASHINGTON, D. C. Feb. 7, 1902.

To supervising and local inspectors of steamboats and others:

At the regular meeting of the Board of Supervising Inspectors of Steamboats, held in the Lenman Building, Washington, D. C., January, 1902, in pursuance of section 4405, revised statutes of the United States, amendments were made to sections 6, 9, 26, 38, and 39, Rule II; sections 12 and 23, Rule III; sections 2, 1A, 25, and 26, Rule V; section 7, Rule VI; section 1, Rule IX; and to the Appendix, General Rules and Regulations; to Rule XI, Pilot Rules for Atlantic and Pacific Coast Inland Waters; and to Rules III and X, Pilot Rules for the Great Lakes.

These amendments to the rules, having received the approval of the Secretary of the Treasury, have now the force of law, as provided in section 4405, revised statutes, and must be observed accordingly.

The following resolution, relating to renewal of licenses to officers of vessels, contained in section 2 of the act of Congress approved May 28, 1896, viz., "That all licenses issued to such officers shall be for a term of five years, but the holder of a license may have the same renewed for another five years at any time before its expiration, was adopted by the board, and has received the approval of the Secretary of the Treasury:

Resolved, That the board interprets the law quoted to mean that any such license may be renewed at any time within ninety days prior to the date of its expiration.

The board adopted the following rule for determining the carrying capacity of the Carley life float:

The Carley float shall be allowed a buoyancy of 145.5 pounds on the ocean for every person allowed, and 121 pounds on the lakes for every person allowed.

The board withdrew its approvals of the Bailey, Davis's and Buddenburg and Shaffer's fusible plugs.

The following-named device was approved by the board, and has also received the approval of the Secretary of the Treasury, as required by section 4491, revised statutes: The Kapok life-preserver, presented by H. S. Mackaye, New York, N. Y.

The board, under the authority conferred upon it by section 4429, revised statutes, approved coil and pipe boilers presented by the following-named persons and firms, when such boilers are constructed in all their parts of wrought iron, steel, or cast steel, in the manner as provided in the general rules of the board:

Charles D. Casad, Seattle, Wash.; C. B. Clark, South Brewer, Maine; Clonbrock Steam Boiler Co., Brooklyn, N. Y., (Thomas F. Morrin's improved boiler); B. F. Cook, Fort Pierce, Fla.; Detroit Water-Tube Boiler Co., Detroit, Mich., (The "Acme" boiler); W. E. Dickev, New York, N. Y. (Porcupine boiler); Gorden H. Hardie, Victoria, British Columbia; Charles H. Kimball, Plattsburg, N. Y. ("Kaelma" boiler); New York Ship Building Co., Camden, N. J.; James E. Orme and Henry H. Orme, St. Paul, Minn.; A. L. Rhodes, West Superior, Wis.; The Schaffer Machine and Manufacturing Co., Baltimore, Md.; George W. Swartz, Decatur, Ala. (porcupine boiler); John Trasher, New Orleans, La.; J. E. Vincent, Palatka, Fla. (a water-tube boiler and a porcupine), and George Warrington, Chicago, Ill.

JAS. A. DUMONT,
SUPERVISING INSPECTOR-GENERAL,
PRESIDENT OF THE BOARD OF SUPERVISING INSPECTORS.
Approved February 7, 1902:

L. M. SHAW, Secretary of the Treasury.

Engineers of lake, bay, and sound steamers who have actually performed the duties of engineers for a period of three years shall be entitled to examination for engineer of ocean steamers, applicant to be examined in the use of salt water, method employed in regulating the density of the water in boilers, the application of the hydrometer in determining the density of sea water, and the principle of constructing the instrument, and shall be granted such grade as the inspectors having jurisdiction on the Great Lakes may find him competent to fill.

Provided, That any first-class seaman who has had three years' experience on the deck of a sail vessel and one year's experience in the deck department of a steam vessel will be eligible for an examination for license as second mate of ocean and coastwise steamers of 500 gross tons and under. And it is further provided that where any person has served as (a licensed) third officer of ocean passenger steamers of 3,500 gross tons and upward for five years in actual service, such service may be accepted as a substitute for the one year's service required as chief mate and second mate of such vessels, of all tonnage.

Applicants for license as third mate of ocean or coastwise steam vessel must have had at least three years' experience on such vessels as a mariner or quartermaster. It is provided, however, that persons whose experience at sea has been on ocean sail vessels of over (700) 300 gross tons may be licensed on the following conditions, namely:

Master.—Any person who has had five years' experience on such sail vessels, two years of which (must) have been

as master of such sail vessels, may be licensed as master of ocean and coastwise steam vessels.

Chief mate.—Any person who has had five years' experience on such sail vessels, two years of which (he has served) have been in the capacity of chief mate, may be licensed as chief mate of ocean and coastwise steam vessels.

Third mate.—Any person who has had three years' experience on such sail vessels as mariner may be licensed as third mate of ocean and coastwise steam vessels. * * *

PILOT RULES FOR THE GREAT LAKES.

Rule III. If, when steamers are approaching each other, the pilot of either vessel fails to understand the course or intention of the other, whether from signals being given or answered erroneously, or from other causes, the pilot so in doubt shall immediately signify the same by giving several (five or more) short and rapid blasts of the whistle.

Barges, "barge consorts," or canal boats in tow of a steamer shall carry the red and green side lights, which shall be placed in the same manner as required on other vessels being towed; and a "barge consort" not having her own anchor down, but hanging on a hawser astern of a towing steamer at anchor shall carry, in addition to the red and green side lights, a red light at the foremast head and a red light at end of main peak, or in equivalent positions at bow and stern.

STEAM TURBINES.

An interesting paper was read recently at a meeting of engineers and shipbuilders in Great Britain, in which the following was said: Single-disc turbines must revolve at enormous speed and be geared down for driving ordinary machinery. For example, a 10 in. De Laval turbine working at 70 lb. pressure revolves 14,000 times per minute. Geared motors are avoided like the plague by most engineers, and so the multiple-step steam turbine was devised as a means for reducing the speed of rotation and driving machinery direct. This was first developed into a marketable commodity by Parsons during 1884-7. The modern Parsons-turbines from which such notably economical steaming results have been obtained, differ from the earliest (apart from improvements in mechanical and constructional detail) only in the alteration of the contour of the steam passages or nozzles from a zigzag to a sinuous shape. Professor Curtis, of New York, has designed large steam turbines which follow Parsons very closely in theory, but are differently worked out mechanically. Professor A. Rateau, in conjunction with Messrs. Sautter, Harle and Co., of Paris, has worked out a multiple-step impulse steam turbine consisting of a number of Pelton or Laval wheels arranged in series on a shaft, each wheel revolving in a separate chamber. Distributing nozzles convey the steam to the wheel vanes, and the whole of the expansion is accomplished within the fixed nozzles. The steam leaves the chambers at almost the same pressure at which it entered, the wheel vanes merely receiving the impulse due to the velocity of its particles; there is, therefore, in this case no tendency to leakage and no necessity for fine fits or clearance. A machine of this type has been built of 1,200 B. H. P., and one is now in hand of 1,800 B. H. P., from which a steam consumption of 12½ lb. B. H. P. per hour is expected.

AN ODD CRAFT.

One of the most unique features in the line of "steam-boating" is one that it is said will be launched next summer. It seems to be a combination of a steamboat, a ball room, a cafe, a merry-go-round, ice cream parlor and a hotel. The following articles appearing in the Davenport Republican gives an idea of this peculiar craft, which is said to be a possible acquisition to the flotilla, which will plough through the "Father of Waters" next season:

If his present plans do not miscarry, one of these times Col. H. P. Pierce of merry-go-round fame, will launch a craft so unique that it will be the wonder of the river from St. Paul to New Orleans, says the Muscatine Journal.

Col. Pierce's plan is to build a couple of long flat boats, and placing them fourteen feet apart, secured by substantial framework, make an enormous catamaran. Upon this double hull he will mount his merry-go-round, which will ride as steadily in all weathers as on solid ground. On bow and stern of each section of the craft he will build booths, one to be used as a lunch room, one as an ice cream parlor, one for cigars and the other for confectionery. An upper deck will be constructed overhead, which will be fitted up with staterooms, dining and living rooms, etc. The outfit will be handsomely decorated, gorgeous with flags and banners at night, brilliantly illuminated with electric lights. Furthermore, the center will be so arranged that it can be quickly cleared for a dancing floor to accommodate private dancing parties, using the musical instrument which at other times does service to cheer the hearts of the merry-makers in the merry-go-round.

The craft in this way can be run the year round, in summer and early fall on the upper river and during the winter from Cairo to New Orleans. She can tie up at any town, or at a plantation down south, and wherever she stops her very novelty can hardly fail to attract crowds, who will naturally patronize one or all of the departments. The scheme is a decidedly novel one and should be a regular mint for its proprietors. Col. Pierce has his plans pretty well completed and if he can interest sufficient capital says he will surely pull it through.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Theft of Goods.—Where consignee of goods allows them to remain in the carrier's warehouse for three days, and they are stolen, without fault of the carrier, at the end of the period, the consignee cannot recover their value of the carrier. *King vs. New Brunswick, A. & N. Y. Steamboat Co.*, 73 N. Y. Supp. 999.

Admiralty—Review on Appeal—Questions of Fact.—When two courts have considered the facts, and reached the same conclusion as to the fault for a collision, the burden rests upon the appellant to show that such decisions were manifestly wrong before the judgment of the lower court will be reversed. *Wilder's S. S. et al., vs. Low et al.*, 112 Fed. Rep. (U. S.) 161.

Stipulation for release of Vessel—Liability of Sureties.—A stipulation given for the release of a libeled vessel takes the place of the released property, and the sureties become parties to the cause, and are bound by orders subsequently made therein to the same extent as the claimant. A decree rendered upon an amended libel, which the court had power to permit to be filed, is as binding upon the sureties as upon their principal. *Fairgrieve et al., vs. Marine Ins. Co., Limited, of London*, 112 Fed. Rep. (U. S.) 36.

Carriers—Liability as Warehouseman.—Where the wife of the consignee of goods, in charge of his place of business in his absence, is notified by a carrier that the goods for him have arrived, and she requests the carrier to leave them on its local dock, as her husband is not ready for them, the carrier, after a reasonable time in which the husband could remove them, becomes liable as a warehouseman only in case of negligence. *King vs. New Brunswick, A. & N. Y. Steamboat Co.*, 73 N. Y. Supp. 999.

Approaching Vessels—Fluctuating Lights.—Under the settled rule of the admiralty courts it is the duty of a steamer, when the lights of an approaching vessel are fluctuating, or for any reason there appears to be uncertainty as to her course, to slacken speed, and, if necessary, stop, neither proceeding nor changing course until the course of the other vessel has been ascertained; and this duty is specifically imposed by article 23 of the navigation rules upon a steam vessel which is required to keep out of the way of another vessel. *Wilder's S. S. Co., et al., vs. Low et al.*, 112 Fed. Rep. (U. S.) 161.

Collision—International Rules—Duty of Steam Vessels.—The suggestion in the preliminary note to article 17 of the international navigation rules (26 Stat. 320), relating to sailing vessels approaching one another, that, if the compass bearing of an approaching vessel does not appreciably change as the two vessels draw nearer together, there should be deemed to be risk of collision, is not a rule of navigation, but merely a suggestion of one circumstance which denotes that there is danger of collision; and a steamer is not justified in assuming that there is no risk because there is an appreciable change in the compass bearing of the lights of a sailing vessel seen at night, which should manifestly be an unwarranted assumption under some circumstances. *Wilder's S. S. Co., et al., vs. Low et al.*, 112 Fed. Rep. (U. S.) 161.

Shipping—Suit for Injury to Vessel—Award of Damages.—Where the insurer of a vessel pays a loss occasioned by her injury through the fault of another vessel only after the damage has been appraised by a commission, and the ordinary steps have been taken to verify such appraisal, there is a strong presumption that the damage was equal to the amount paid; and the estimate of witnesses who made an examination of the vessel five or six years later for the express purpose of minimizing the damages does not justify an appellate court in reversing a decree for damages against the offending vessel equal to the amount of the original appraisal, and which is also supported by other evidence. *Fairgrieve et al., vs. Marine Ins. Co., Limited, of London*, 112 Fed. Rep. (U. S.) 364.

Steamer and Sailing Vessel Crossing—Evidence Considered.—In an action against a steamer for collision with a barkentine in the night, in which the latter was sunk, the weight of evidence sustained the claim of the barkentine that she kept her course, and carried proper lights, which were burning brightly. On the other hand, it appeared that the steamer had no lookout; that the officer in charge saw the lights of the barkentine some ten minutes before the collision, and when they were probably two miles distant, was unable to make out the character or course of the other vessel; that he took no steps to ascertain, and continued at full speed of ten knots, keeping his course, until about two minutes before the collision, when it was changed a few points to starboard, in which direction the barkentine was moving. Held, that the steamer was in fault for the collision, not only because of the presumption against her arising from the rule requiring her to keep out of the way, but because the evidence showed that her navigation was improper and negligent. *Wilder's S. S. Co., et al., vs. Low et al.*, 112 Fed. Rep. (U. S.) 161.



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CLEVELAND, O., FEBRUARY 20, 1902.

METEOROLOGICAL CHART.

The government has just issued the "meteorological chart for the Great Lakes" for 1901. In summarizing the conditions that prevailed in the lakes for the past year, the report tells of the dense smoke from Canadian forest fires near Georgian Bay that drifted over the eastern end of Lake Superior on Sept. 6, last, and under the influence of brisk northeast winds overspread Lakes Michigan, Huron, and Erie on the following day. A great fire had been raging in the Canadian forests to the east of Lake Huron. The smoky condition of the upper air had been observed for several days as far away as Chicago. When the wind shifted to the northeast on Sept. 7 the air over a large part of the lakes became filled to an unusual degree with dust and smoke. The air became so thick that range lights and other channel marks were for some time completely obscured, the brisk winds raising simultaneously a heavy sea. As a result of this obstruction of the lights, the high wind and the waves, nine vessels were stranded off Fort Gratoit light at the extreme southern end of Lake Huron, between 7 p. m. and midnight.

The cloud of smoke swept away by the next morning, but it had become so dense on the Detroit river in the meantime as to delay navigation for some hours on Sept. 8. Many other disasters were caused by the smoke fog in various parts of the lakes, greater loss resulting than was ever known before to be caused by smoke in these regions.

FRAUDULENT TRANSPORTATION.

The discovery has just been made by the Central Passenger Association, that some of the roads have been deprived of large amounts of revenue by the manipulation of so-called sailors' tickets. Under a rule of the association, the roads sell half-fare tickets to sailors after the close of navigation, from lake ports where the vessels are tied up for the winter to the ports where the men were hired. To entitle the sailor to this privilege a certificate had to be presented from the captain of the vessel on which he was employed, countersigned by the joint agent for the lake lines at each port.

Commissioner Donald of Chicago announced Thursday, that he had discovered over 100 violations of the above mentioned rule by one railroad alone. Investigation, it is claimed, discloses the fact that managers and agents of insurance companies, doctors, lawyers, merchants and others have been traveling in sleeping cars as sailors returning to their home ports. All the association roads have been requested to send him a complete list of all tickets sold at half rates on sailors' certificates.

A CANADIAN SHIP CANAL.

In a speech before the Canadian Parliament, according to the Toronto Mail and Empire, Minister Tarte strongly favored a canal from Georgian Bay to North Bay, and also suggested that the government would do well to offer a bonus for shipbuilding. He was careful to say that on neither of these propositions was he voicing the sentiments of his colleagues in the Cabinet. His views regarding the canal were cordially endorsed by Mr. Haggart.

In connection with the French river project, he said, by a comparatively small expenditure of money, within two years, a navigable channel twenty feet deep could be built from the Georgian Bay to Lake Nipissing. The difference in level to be overcome was only sixty-two feet, the distance being sixty-one miles. On Lake Nipissing connection would be made with the C. P. R. at North Bay, and at Callender with the Grand Trunk. The distance to Montreal was 360 miles, and to Toronto 290 miles. The construction of this contract would be of inestimable benefit to the northwest farmer. He did not hesitate to say that it would be equal to a couple of millions of dollars on such a crop as this year.

There would be three locks, with a capacity for vessels carrying 200,000 bushels each. The advantage of the Canadian route by the French river over any of the American routes would be not less than 150 miles.

Supposing the whole of this year's crop from the northwest could be carried by a Canadian route, it would keep twenty vessels steadily employed to move the crop. He ventured the prediction that within ten years the output of wheat in the northwest would reach 200,000,000 bushels, as compared with 65,000,000 bushels this year. He had no data of the cost of the canal from the mouth of the French river to Montreal, but was told it would be in the vicinity of \$100,000,000. He ventured to say that no Canadian Parliament would embark on such an expenditure at present. He felt he was voicing the feelings of every business man in Canada when he called attention to the importance of the French river route.

PENSION FOR LIGHT KEEPERS.

A dispatch from Washington says: "A bill in the interests of light-house keepers was introduced by Representative Maynard, today. It makes the salaries of the keepers \$50 a month, and assistants \$40, but the more important feature of the provision is that after ten years' continuous service, keepers and assistants who become disabled shall be pensioned on half pay. Discretionary power is given to the Secretary of the Treasury to determine who shall be entitled to pensions."

COMMANDER LIGHT-HOUSE DISTRICT ORDERED FOR SEA DUTY.

Commander John C. Wilson, U. S. N., Eleventh light-house district, stationed at Detroit, has received orders from the Navy Department to be ready for sea duty, and he will probably leave in a few days. He will be succeeded as light-house inspector of the district by Edward H. Green, commander last in charge of the U. S. cruiser Marietta, doing duty in Asiatic waters.

Commander Wilson has been in charge of the district for the past two years, having come here after being detached from the cruiser Indiana.

He began his naval studies in 1865, graduating in 1869, and has been on naval sea duty almost continuously since.

He was two years on the Pacific and two years on the North Atlantic stations, and has been on every United States naval station in the world, with the exception of the South Atlantic.

It is probable that Commander Wilson will be given command of a United States cruiser and sent to Asiatic waters.

Comander Green, his successor, has been in the naval service since 1861 and hails from Pennsylvania. The district extends from the River Rouge in the Detroit river, to the head of Lake Superior.

From one who has an intimate knowledge of the cost of wrecking jobs, we learn that the probable expense of wrecking steamer Pere Marquette 3, is estimated to cost about \$15,000, says the Ludington Record-Appeal. The bills are divided about as follows: Capt. Reid, labor and use of pumps, \$8,000; tug Meyer, ten days at \$250 per day, \$2,500; other tugs, labor, and incidentals, \$4,500.

DETROIT RIVER WRECKING EQUIPMENT.

The wrecking equipment of the tug trust at Detroit during the coming year will be second to none on the lakes, and nothing will be left undone which would add to its thoroughness and efficiency.

Several changes from the past are going to be inaugurated, and it is said that one of the most important changes will be no less than a new management of the tug trust property. For several years Capt. J. W. Westcott has been the Detroit river representative of the tug trust, but from an authoritative source it has been learned that A. W. & B. W. Parker, from whom the Great Lakes Towing Co. bought the wreckers Saginaw and Favorite will now handle the wrecking business from Detroit. While neither of these gentlemen will say anything definite about the matter at this time, claiming that negotiations have not been concluded and that it would be unwise to make any premature announcement of the plans of the trust until everything has been closed, it is almost a certainty that they will be the tug trust representative in Detroit.

Capt. Isaac Watt of Windsor, it is understood, will represent the company at Windsor, under the directions of the Parkers, he having charge of the actual operation of the Saginaw and Wales, while the business end will be taken care of from Parkers' office at the foot of Griswold street. Capt. Watt will also be master of the Saginaw as heretofore.

One of the most powerful tugs of the trust will be stationed in Detroit to take care of the new 1,500-ton lighter now being built at Bay City. This will be equipped with all the latest wrecking appliances, and the whole outfit, wreckers, lighter and tugs will operate in the territory between Port Huron and Toledo. The station is central, about half way between both points, and can give quick assistance to boats in trouble at any place from Lake Erie to Lake Huron, although most of the wrecking work as has been the case in the past, will probably be in the lower river, on the Limekiln Crossings and that vicinity.

The trust tug Boynton, which has been stationed at Port Huron will be shifted to the "Soo" and the A. W. Cotton will be transferred from Toledo to Port Huron.

CHANGING PORT OF HAIL.

The recent change in the laws of Indiana governing the taxation of vessel property is causing an exodus of ships from Chicago to Michigan City. The ownership of four vessels has just been transferred to the Indiana port. They were the steamers J. D. Marshall, Francis Hinton, P. J. Ralph, and the schooner Harold. Several more will be transferred to Indiana before the time comes for the tax assessor to make his rounds. The Indiana law places taxation on vessel property on the basis of three cents per ton per year. The Illinois law subjects vessels to the taxation on values, on the same basis and at the same rate as other personal property. Minnesota, which adopted the tonnage tax two years ago and secured for Duluth a large amount of vessel property, is likely to repeal the law this winter. Such a repeal will cause a general transfer of fleets from Duluth to Michigan City. The Chicago boats which now have Duluth for a port of hail will undoubtedly be changed to Indiana's sole port. As Michigan City is located in the Chicago customs district, this port would again obtain the credit of ownership, while the city would not get the taxes.

TRANSFER OF LUMBER CARRIERS.

The report from all over the chain of lakes has been of an unusual demand for lumber tonnage during the year. The sales of boats so far have been confined almost entirely to the little hookers, ore and grain vessels having changed hands in but few cases. The inquiries in this section have been heavy and a number of deals are now said to be on that may have some results soon. J. C. Gilchrist & Co., Cleveland, sent out a printed slip announcing the boats they have for sale this year. Among others here are three lumber tows, one of which will go for \$100,000 another for \$60,000, and the third for \$58,000. Aside from this there are thirty-one freight carriers, two of which are lumber hookers and three that can be altered for lumber carriers. The fleet for sale also includes nineteen barges, the highest priced being for \$25,000 and the lowest for \$1,500. The list is completed by fourteen schooners.

BUFFALO HARBOR IMPROVEMENTS.

A special committee composed of prominent citizens of Buffalo, advocate harbor improvements at a total cost of \$428,000. It is thought the entire work can be done in one year and the general sentiment was that the expense should be met in one lump and not on the installment plan. Capt. J. J. H. Brown pointed out numerous advantages resulting to the city from harbor improvements and claimed, if more attention was paid to the harbor and less to the parks, the city would be much richer. As an instance of money spent by boats he said the North Land and North West which are wintering in Buffalo, would spend \$350,000 in this city for new boilers, remodeling of cabins and new furniture. Capt. Brown says every vessel that comes to Buffalo during a season spends at least \$1,200 every time she comes into port.

Capt. Brown presented the following figures:

The total number of vessels that entered the ports of Superior and Duluth in 1895 was 5,505. Their registered tonnage was 5,665,752 tons.

The total number of vessels entering the same ports in 1901 was 6,681. Their net registered tonnage was 8,655,957; showing an increase since 1895 of 1,176 vessels and 2,990,205 tons, or 21 per cent. vessels and 52.07 per cent. in tonnage.

The total number of vessels that entered Chicago proper in 1895 was 7,557. Their total net registered tonnage was 4,585,385.

The total number of vessels that entered Chicago in 1901 was 8,430. Their total net registered tonnage was 6,900,999; showing an increase since 1895 of 1873 vessels and 2,315,614 tons, or 11½ per cent. in vessels and 50½ per cent. in tonnage.

The total number of vessels that entered Cleveland in 1895 was 3,345. The total net registered tonnage was 2,287,073.

The total number of vessels that entered Cleveland in 1901 was 3,697. Their total net registered tonnage was 4,057,095, showing an increase since 1895 of 552 vessels and 1,770,022 tons, or 16 per cent. in vessels and 77 per cent. in tonnage.

The total number of vessels that entered Buffalo in 1895 was 4,758. Their total net registered tonnage was 4,684,997 tons.

The total number of vessels that entered Buffalo in 1901 was 5,564. Their total net registered tonnage was 5,170,429, showing an increase since 1895 of only 806 vessels and 485,432, or 17 per cent. vessels and 10.3 per cent. in tonnage.

LAUNCH OF THE GREYHOUND.

The novel sight of a mid-winter launching, with ice two feet thick, which had to be cut out of the slip in order to allow the boat to be launched, was witnessed at the Wyandotte yards of the American Ship Building Co., on Saturday last, when the new White Star Line steamer, Greyhound, took her initial dip.

The launch was a success in every way, and although the boat had a drop of four feet and rolled after leaving the ways, she straightened up, and, aside from a small dent in one of her plates when she struck the opposite side of the slip, no mishaps attended the mid-winter launch.

She measures 300 feet in length, and, over guards, is sixty-eight feet wide. The engines will be of the walking beam type. The feathering type of side propelling wheels will be used, and in this way the jar and tremor common to boats will be absolutely done away with. Steam will be supplied by three boilers.

The exterior of the new Greyhound's upper works will be of pine, painted white. The interior will be finished in hardwood cabinet work, quartersawed oak being used on the main deck, mahogany in the dining room and grand saloon, and chestnut and stained malachite in the gentlemen's smoking room on the hurricane deck. The new boat will have a ladies' parlor, or observatory, on the hurricane deck which will be trimmed in white and gold. This is an entirely new feature. The carrying capacity of the new Greyhound will be 3,000, which is about double the capacity of any other passenger steamer that has ever run out of Toledo.

THE GREAT LAKES TOWING CO.

The annual meeting of the stockholders of the Great Lakes Towing Co. was held in New Jersey on Wednesday. All the old directors were re-elected as follows: Gen. George A. Garretson, W. G. Mather, L. C. Hanna, H. G. Dalton, C. E. Grover and T. F. Newman, Cleveland; L. M. Bowers, Binghamton; C. W. Elphicke, Chicago; Jas. Ash, Edward Smith, Buffalo; C. D. Thompson, Port Huron; Capt. James Davidson, Bay City; A. B. Wolvin, Duluth and W. T. Coleman Carpenter, Jersey City. The directors will meet here next Wednesday and elect officers. It is not expected that there will be any change made in the officials of the company. They are as follows: President and treasurer, Mr. T. F. Newman, Cleveland; vice president, Capt. James Davidson, Bay City; second vice president, Capt. A. B. Wolvin, Duluth; third vice president, Mr. Edward Smith, Buffalo; general manager, C. H. Sinclair, Cleveland; secretary, Mr. M. H. Wardwell, Cleveland; executive committee, G. A. Garretson, chairman; Capt. James Davidson, A. B. Wolvin, L. M. Bowers, C. E. Grover, H. G. Dalton, T. F. Newman; counsel, James H. Hoyt, Esq., Harvey D. Goulder, Esq.

LAKE FREIGHT SITUATION.

Another block of iron ore was covered this week for the season's movement. This consisted of 75,000 tons, for the movement of which the rate was 80 cents between Duluth and Ohio ports. This is therefore identical with the rate which has prevailed hitherto in the transactions of like nature. Prior to this time a block of 50,000 tons had been covered, demanding a movement from Escanaba to Ohio ports on the basis of 60 cents; Marquette paying 70 cents, which was the expected rate from these points, the freights out of Duluth being taken into consideration. This charter, with those which were made the latter part of last week and on Monday of this week, make an aggregate of about 2,000,000 tons covered for movement to this date.

With all this, however, there has been nothing yet to indicate what will be the attitude of the U. S. Steel Corporation toward the rate question, and some of the biggest shippers have as yet done nothing. This fact is in part explained by the lack of ore sales, but it is also apparent that some of the companies are waiting upon the Steel Corporation to make some charters, so that the rate will be permanently established. Aside from this there is plenty of time, and the shippers do not believe in rushing matters too fast. Consequently the ore freight market is about as dull as it possibly can be and there is no indication of a change in the situation, as neither side shows any sign of closing up the 5 cent gap. The vesselmen say that it is up to the shippers and that if they want to do any business they will have to pay last year's rates. On the other hand, the ore men claim that there is nothing in the outlook to change their position and that the conditions are the same as they were two weeks ago when they decided that season chartering should be done on the basis of 75 cents from the head of Lake Superior. The shippers that have chartered are pretty well provided with season tonnage and until the other dealers come into the market the indications are that there will not be much doing unless there is a break in the ranks of the vesselmen. The latter claim that there is no chance of that taking place.

The rates offered by the big shippers are 75 cents from the head of Lake Superior, 65 cents from Marquette and 55 cents from Escanaba. All the figuring that has been done by the ore men on the coming season has been done on the basis of 22,000,000 tons as the total output, which is an increase of a little more than 1,500,000 tons over last year. It is expected that all the shippers will move more ore than they did in 1901 and it is known that one firm has sold 1,200,000 tons more than it shipped last year. Vesselmen are banking on a movement of 24,000,000 tons and wagers have been made that the shipment will exceed 23,000,000 tons.

A meeting of the lake coal shippers will be held the latter part of the week, when prices will probably be fixed and after that the shippers will be in shape to talk freights. Very little attention has been paid to the coal end of the business, and it is not likely that chartering in that trade will be heavy until more tonnage is lined up for ore. On season contracts vesselmen are talking 40 cents to the head of Lake Superior and 50 cents to Milwaukee. Prices for fuel will probably be fixed at the meeting this week.

Lumber shippers are doing some figuring but it cannot be learned that any deals have been closed. A dispatch from Duluth says: The prospective rate for the transportation of lumber by lake at the opening of navigation is \$2.50 per 1,000 feet. But it is not as easy to forecast the lumber rate as it used to be before so many of the big consignees had provided themselves with boats of their own. The consignees owning enough tonnage to handle the greater part of their lumber would naturally like to see a high rate in order to place their competitors who do not own boats, at a disadvantage in the matter of prices and profits on lumber at points of destination. The \$2.50 rate is profitable for the vesselmen.

There was some inquiry this week for grain carriers at the head of Lake Superior and owners were offered 2¼ cents on wheat to Chicago or Buffalo. Some business was done at that figure, which, vesselmen say, with the difference in unloading charges is equal to 90 cents on ore. A Duluth broker wired that the elevators at that port have 13,000,000 bushels of grain in store and that the houses at Ft. William are filled. Last year at this time the Duluth elevators had 11,500,000 bushels in store. The Chicago market is quiet and very little chartering is being done.

ICE CONDITIONS.

The last snow and ice bulletin of the Weather Bureau, gives the thickness of ice at various lake points as follows: Alpena, 12½ inches; Detroit, 14½ inches; Escanaba, 20 inches; Grand Haven, 5 inches; Houghton, 16 inches; Marquette, 6 inches; Port Huron, 11 inches; Sault Ste. Marie, 18 inches; Duluth, 20½ inches; Oswego, 14½ inches; Sandusky, 15 inches; Toledo, 7 inches; Erie, 10½ inches; Buffalo, 12 inches; Ashland, 23 inches; Green Bay, 16 inches; Washburn, 14. At Cleveland the harbor ice ranges from 10 inches to 6 feet, being greatly windrowed; averages 2 feet 6 inches; no ice in the river. As compared with the corresponding period of 1901, there is considerable more ice throughout the lake region and in the western rivers, but in New England there is decidedly less.

LAUNCH OF THE SULTANA.

The steamer Sultana was launched last Saturday at the West Superior yards of the American Ship Building Co., in the presence of one of the largest crowds that has ever assembled to witness such an event.

As the boat started down the ways, the christening bottle was smashed against her side by Miss Dorothy Moore, the little daughter of Mr. and Mrs. W. S. Moore, of Duluth, and the huge steamer was christened the "Sultana." The christening bottle was decorated with yellow and blue ribbons, the colors of the University of Michigan. These colors will be used on the private signal pennants of the boat, with the letter "D" in the center.

The Sultana is the property of the Duluth Steamship Co., of which G. A. Tomlinson, of Duluth, is president, and of which many Duluth people are members. For that reason Duluth was well represented in the crowd of spectators that gathered to view the launch, also the members of the Duluth Board of Trade.

The steamer will be completed and ready to go in service by the time navigation opens in the spring. She will be used in the grain trade. The Sultana when completed will cost \$230,000, and will be one of the best equipped boats on the lakes. She is 366 feet long, 48 feet beam, and 28 feet deep.

FLOTSAM, JETSAM AND LAGAN.

Capt. Andrew Campbell has been appointed master of the steamer Philadelphia, of the Algoma Central Steamship Co.

Soundings taken in the harbor at Duluth on Monday, showed ice from sixteen to twenty-five inches thick, while the lake ice is about five inches in thickness. The ice field in the lake extends out as far as the eye can reach from Duluth. On February 10, 1900, the harbor ice averaged 21.5 inches thick, and on the same date, 1901, it was 23.5 inches thick.

A bit of ancient history in the form of a bill of lading has been exhibited recently in the office of Brown & Co., of Buffalo. It is dated October 28, 1853. The vessel is the barque Superior. A. S. Gotham, master, and her cargo consisted of 19,500 bushels of wheat shipped from Chicago by E. K. Bruce, and consigned to P. L. Sternberg & Co., Buffalo. The freight was "only" ten and one-half cents a bushel.

A general conference between the Longshoremen's union at the head of Lake Superior and the committee of the Lumber Carriers' Association, to fix wages for the coming season of navigation, was held at Ashland. It will depend upon the result of this conference whether or not there will be expensive strikes on the Lake Superior lumber docks next season. The lumber carriers are desirous of a uniform rate of wages for the entire Lake Superior region. The men have been receiving generally about 50 cents an hour for their work.

A work of more than ordinary importance and interest has been recently inaugurated by the Division of Hydrography of the United States Geological Survey in a systematic investigation throughout the country of river pollution from city sewerage and other like causes. An attempt will be made to discover the present extent of such pollution from city sewage and other like causes. An attempt Analysis will be made of the water of all the important rivers, especially such as are used for municipal and domestic supply. The investigation is part of the general study of the country's resources, to which one of the divisions of the Geological Survey is devoted.

Trouble between captains, mates and engineers on the boats of the steel corporation fleet is anticipated by Milwaukee vesselmen who hold positions with the corporation. That there is a big lot of trouble brewing is the claim of the Milwaukee men, and it is all on account of a threatened conflict between the captains and engineers as to responsibility. The two departments have been connected in times past, the vesselmen say, so that no trouble was possible, but under the new civil service rules there is certain to be a persistent conflict between the two branches, which it is feared will result in ill-feeling on the boats. The fact that the captains will not be allowed to pick their own mates with the freedom before allowed, will be another troublesome factor.

Sir W. H. Preece, formerly chief electrician to the British Post Office, has been engaged for some time past upon a study of the magnetic influences upon the compass of the Manacles Rocks off the coast of Cornwall, and upon which the steamships "Mohegan" and "Paris" were wrecked. Sir William Preece states as the results of his investigation that if any navigator sets his course from Cherbourg to the Lizard without knowing the variation of the magnet that has occurred during the last five or six years he would run upon the Manacles. The variation was bringing the needle nearer to the North Pole, and in ten years it varied a whole degree. The difference of a degree in a magnet signified an error of one mile in a course of sixty miles, so that unless the captain's observations were maintained with all accuracy and care, if the Admiralty did not correct their charts from time to time, and if captains of ships did not make themselves acquainted with these different errors, then sooner or later disaster was certain to occur.



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BOTH CANAL ROUTES FEASIBLE.

Mr. William H. Burr, a member of the Isthmian Canal Commission publishes an interesting article on the canal project in the February number of Scribner's, in which, after a careful, unprejudiced consideration of the Nicaragua and the Panama routes, he concludes that both are entirely practicable and feasible. His conclusions are as follows:

"Neither route has any material commercial advantage over the other as to time, although the distance between our Atlantic (including Gulf) and Pacific ports is less by the Nicaragua route. The Panama route is about one-fourth the length of that in Nicaragua; it has less locks, less elevation of summit-level, and far less curvature, all contributing to correspondingly decreased risks peculiar to the passage through a canal. The estimated annual cost of operation and maintenance of the Panama route is but six-tenths that for the Nicaragua route. The harbor features may be made adequate for all the needs of a canal by either route, with such little preponderance of advantage as may exist in favor of the Panama crossing. The Commission estimated ten years for the completion of the Panama canal and eight years for the Nicaragua waterway, but the writer believes that these relations should be exchanged, or at least that the time of completion for the Panama route should not be estimated greater than for the Nicaragua. The water supply is practically unlimited on both routes, but the controlling or regulating works, being automatic, are much simpler or more easily operated, and maintained on the Panama route. The Nicaragua route is practically uninhabited and consequently practically no sickness exists there. On the Panama route on the contrary, there is a considerable population extending along the entire line, among which yellow fever and other tropical diseases are properly always found. Initial sanitary works of much larger magnitude would be required on the Panama route than on the Nicaragua, although probably as rigorous sanitary measures would be required during the construction of the canal on one route as on the other. The railroad on the Panama route and other facilities offered by a considerable existing population render the beginning of work and the housing and organization of the requisite labor force less difficult and more prompt than on the Nicaragua route. The relative seismic conditions of the two routes cannot be quantitatively stated with accuracy, but in neither case are they of sufficient gravity to cause anxiety as to the effects upon complete canal structures."

NORTH MAGNETIC POLE.

Norway will send out an expedition next summer, under the command of Prof. Amundsen, for the purpose of relocating the north magnetic pole. The headquarters of the expedition will be Boothia Felix, the most northern point of the North American mainland, directly north of the extreme western side of Hudson Bay.

The expedition expects to be gone three years, and will make as thorough a study as possible of all the magnetic phenomena observable in the neighborhood of the magnetic pole.

It is to the advantage of the enterprise which Prof. Amundsen will lead that the instruments for observing magnetic phenomena have been increased in number and greatly improved in quality since Ross determined the position of the north magnetic pole in 1831, just seventy years ago.

Everybody at this day is supposed to know that the magnetic needle does not point to the geographical pole, but to a center of magnetic influence that is at least 1,200 miles south of it and far west of the North Pole; nor does it point steadily in the same direction, but is subject to daily variations and also, at present, to a very slow and decreasing variation toward the west. This constant variation long ago gave rise to the theory that the magnetic poles of the earth move along a path of greater or less extent.

When Schwatka and Gilder were in King William Land, just west of Boothia Felix, in 1879, their magnetic observations seemed to show that the north magnetic pole had moved more than two degrees of longitude west of its position as fixed by Ross in 1831.

The long period over which Prof. Amundsen is to extend his observations is likely to enable the party to determine the present direction and rate of motion of the variation in position of the north magnetic pole. In a word, a magnetic survey of the area containing it is to be made and the practical result is likely to increase our knowledge of terrestrial magnetism and of the laws that govern the movements of the magnetic needle.

THE MOON AND THE WEATHER.

A belief that the moon has a potent influence on weather changes is well nigh universal. The moon's appearance goes through such marked changes each month that it would be very natural to attribute weather changes to these. In this way undoubtedly such sayings as these have arisen: "The weather won't change until the moon changes." "If the moon lies so water cannot run out, we shall have a drought." "A wet moon is one upon which a huntsman can hang his horn," etc. Diligent inquiry at one time as to the popular belief regarding this question brought out the view, more persistent than any other, that more rain will occur at the new than the full moon. Singularly enough, in Connecticut on Long Island sound there does seem to be such a law, but it does not hold in the interior of the country, and a test on the Pacific coast showed, if anything, exactly the opposite. At London, where observations have been made for more than a century, a careful computation for the whole period has shown no effect.

If we reflect that the moon is dead and does not have any air even upon it, that it always shows the same face to the earth, that its changes are simply due to changes in its position as respects the earth and sun, and that its varying appearances are all borrowed, we see how absurd is the notion that the moon does influence our weather. There is, however, another argument that appears quite valid at first sight. If the moon can raise a tide of 60 feet in the ocean, why may it not raise a tremendous tide in the extremely tenuous air, 800 times lighter than water, or a tide of about 48,000 feet, and, if so, it seems easy to see that such a commotion would affect our weather enormously.

The tide of 60 feet (the highest in the world) is experienced only in the bay of Fundy and is due to the configuration of the Atlantic coast. In the open Pacific the tide is only a little over a foot. Most careful observations of a lunar atmospheric tide have been made at St. Helena, in mid-ocean, and have shown a tide a little more than 0.001 inch. Since ordinary weather changes affect the pressure 1,000 times as much, we see how extremely insignificant the moon's total effect must be.

There is a common saying, "The full moon has power to drive away clouds," and some computations seem to bear out this idea. If any one will look to the east as the rising full moon shines through the clouds, he will often see the clouds disappear. There is a natural explanation for this, however, and is nowise dependent upon the moon. A long series of observations has shown a diurnal range of cloudiness with a minimum point, or time of least clouds from 6 to 9 p. m., hence we see that as the full moon rises and advances in the sky during this period there will often appear a diminution of clouds. Lord Rosse turned his big reflecting telescope (so big that a tall man walking erect in it could carry a spread umbrella) toward the moon and found that, if anything, the earth received just a little chilling from the full moon. More recently the bolometer, an instrument which can measure less than one millionth of a degree of temperature change, has shown that the earth receives a tiny bit of heat from the full moon. The evidence is cumulative and overwhelming that no weather changes can be ascribed to the moon.—Professor H. A. Hazen in Popular Science.

A TREASURY DECISION.

PREVENTION OF TUBERCULOSIS AMONG MERCHANT SEAMEN.

TREASURY DEPARTMENT,
OFFICE OF SUPERVISING SURGEON-GENERAL M. H. S.,
WASHINGTON, D. C., Feb. 11, 1902.

To commissioned officers and acting assistant surgeons,
U. S. Marine-Hospital Service:

In order to aid in the prevention of the spread of tuberculosis among seamen of the merchant marine, the following rules will be observed whenever practicable:

Whenever a seaman suffering with tubercle of the lung applies for treatment at a relief station of the Service, the medical officer or acting assistant surgeon in charge there shall notify the master or accredited agent of the vessel of which said seaman sailed immediately preceding his application for relief, and, if said vessel is in port, shall, with the consent and aid of the master, owner, or agent of the vessel, disinfect the forecabin or other apartment previously occupied by the aforesaid seaman.

The method of disinfection shall be as follows:

1. Thorough mechanical cleansing of floors, walls, and bunks with hot water and concentrated lye.
2. Wetting floors, walls, and bunks with either of the following solutions: Solution 1—Carbolic acid, 1 part water, 100 parts. Solution 2—Corrosive sublimate, 1 part hydrochloric acid, 2 parts; water, 1,000 parts.

Forecabin should be painted or whitewashed after disinfection, when practicable.

Masters, owners, and agents of vessels should be informed of the importance of compliance with the provisions of this circular.

A report should be rendered to the Bureau of every forecabin disinfected under the provisions of this circular, soon as the disinfection shall have been effected.

You are directed to acknowledge the receipt of this circular.

WALTER WYMAN,
Supervising Surgeon-General M. H. S.

Approved: L. M. SHAW, Secretary of the Treasury.

Collision—Tugs and Tows Passing at Drawbridge—Failure of Tow to Obey Signal from Tug.—The tug Mystic towing a raft down stream in the St. Louis river at Duluth approached the draw of a bridge, while the tug Industry was approaching from the other side, towing the steam Peerless. There were two channels through the draw, and the tugs agreed by signal that the Mystic should pass through the south channel and the Industry the north channel. It was necessary for the Mystic to push her raft south of the channel, where it would float under the bridge, and in doing so she backed into the north channel to obtain headway, intending to immediately go forward again, and be out of the way before the Industry, which was about 70 feet distant, should reach the draw, which she in fact was. The master of the Industry, seeing the maneuver, signaled the Peerless to back, which she did; but, when the Mystic began to move ahead, he signaled the Peerless to stop backing, which signal she did not obey, but kept backing until the tug had towed her nearly 500 feet beyond the draw, when her bow came in collision with a barge, which was being towed down the draw by a third tug, and she was sunk. The testimony tended to show that her continuing backing while the tug was going forward threw her bow on one side of the course of the tug, and that otherwise the collision would not have occurred. Held, that the action of the Mystic could not be considered the proximate cause of the collision, which must be attributed solely to the fault of the Peerless in failing to obey the signal of her tug to stop backing. Lake Michigan & L. S. Transp. Co. vs. Union Towing & Wrecking Co. et al., 112 Fed. Rep. (U. S.) 155.

The steamer John Rugee has been sold to the George Hall Co., Ogdensburg, N. Y., for \$50,000. The steamer of 1,216 tons and was built in Milwaukee in 1888.

NEW DEVICE FOR THE RAPID FUELING OF BOATS.

The new device for the fueling of boats, now building for the Pittsburg Coal Co., and which has a guaranteed speed of 300 tons per hour, is composed of a revolving derrick frame supporting an adjustable conveyor which connects with a telescope spout. The whole arrangement is such that after the fuel boat is made fast the steamer can be coaled without it being necessary to change position of fuel boat. The machine is the invention of Mr. Timothy Long, superintendent of docks for the Pittsburg Coal Co.

Mr. Long, it will be remembered, is the man that after the Lindsay Car unloading machine proved a failure, patented, built, and operated the car unloader located at West River street, on the Erie R. R. This machine cost about \$20,000.00 or about 1-3 of what the Lindsay machine cost.

The question at that time was can a machine be built that can take any size car, turn car over, and replace it right side up without injuring it. Some people thought it was impossible and would point to the Lindsay machine as a sample. Two end dumping machines were built about this time, one at Ashtabula and one at Fairport, the end dumping machine required the changing of thousands of cars to supply those special machines. The first Long machine was built to suit the largest car then in use in the Erie R. R. Some of the records of the machine are 176 cars of coal in 8 hours and 15 minutes, 27 cars nut coal in 24 minutes, 1 car of lump in 16 seconds, 1 car slack in 9 seconds. The machine was built in 1895, and can do the work as well now as then.

A lot of people predicted that the machine would be a failure, but when the machine worked all right they hedged around and said it was too fast and broke the coal. Such critics would not be satisfied if you constructed a machine to load eggs without breaking them.

Mr. Long is also the patentee of Long's drop bottom coal bucket, about 500 of which are in use on the lakes, also a patented clam-shell bucket and other devices.

Mr. Timothy Long has been connected with docks and dock machinery for about 27 years, some of the firms he has worked for are:

Massillon Fuel Co., J. M. Drake, Mgr., O. & P. Coal Co., Sunderland & Rucker and the Sunday Creek Coal Co., was superintendent of docks at Milwaukee for 7 years, Krause & Hanlon two years, Excelsior Iron Works as erector of machinery 10 years. Has been in business under the name of the Long & Murphy Boiler Co. for about 18 months.

MARINE PATENTS ISSUED.

692,815.—Mouthpiece for suction dredges. Lindon W. Bates, Chicago, Ill.

692,845.—Ball bearing row lock. Thomas H. Garrett, jr., Auburn, N. Y.

692,910.—Propeller for vessels. Detlef H. Rohwedder, Chicago, Ill.

692,973.—Hydraulic dredge. Lindon W. Bates, Chicago, Ill.

693,097.—Barrel tongs. Chester M. Baldwin, Bronson, Mich., assignor of one-half to James H. Shaw, same place.

693,228.—Boat adapted to be propelled on land or in the water. Samuel T. Brittain, Boston, Mass.

693,235.—Piling. Amasa B. Clark, New York, N. Y.

693,242.—Apparatus for cleaning bottoms of ships. Robert S. Culpepper, Houston, Tex., assignor of two-thirds to Abnus B. Kerr and Ira M. Bryce, same place.

693,272.—Automatic diving mechanism for submarine boats. John P. Holland, Newark, N. J.

Failure to Maintain Lookout.—For an officer to leave his vessel entirely without a lookout, especially when another vessel is known to be in the vicinity, is culpable negligence, and approaches very nearly the line of reckless navigation. When it is shown that a steamer had no lookout at night, and failed to station one, although the officer in charge saw the lights of another vessel ahead ten minutes before collision, but was unable to make them out distinctly, every doubt will be resolved against such steamer in an action for the collision. *Wilder's S. S. Co., et al., vs. Low et al.*, 112 Fed. Rep. (U. S.) 161.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

The business transacted during this week has been even on a smaller scale than last, which indicates a lack of orders in almost every branch of business from this coast. Owners are very reluctant to charter ahead at the existing rates, but on the other hand we cannot see any sign of improvement ahead. The only direction in which there is any business moving is from the Gulf timber ports, for which a few charters are reported, but in most cases, owners' ideas are above those of charterers, and in consequence transactions are limited. Grain shippers are still unable to effect new business, and there appears little likelihood of any active movement in this article. We have no cotton fixtures to report in this issue, and as previously stated, the only chance of anything being done from the South Atlantic ports is in connection with phosphate orders previously contracted for. Coal shipments from this coast to Continental and Mediterranean ports are practically at a standstill. There is some little inquiry for tonnage for deals from the Bay of Fundy district for Spring loading, on the basis of 35s. per standard to West Coast of England.

Inquiry for sail tonnage is still very limited, consequently shippers' views show no improvement, while owners on the other hand show an indifference in accepting business on the basis of last charters.

ANNIVERSARY OF THE "SOO" CANAL.

Congressman Carlos D. Sheldon, of the upper peninsula of Michigan, has introduced a joint resolution in the House of Representatives at Washington, to provide for the commemoration of the semi-centennial anniversary of the commencement of the construction of a canal at Sault Ste. Marie, Mich., which occurs on June 4, 1903. Senator McMillan, of Michigan, has also sent an abbreviated resolution to the same purpose to the committee on commerce of the Senate, but the language of both will undoubtedly be made identical. When the subject was brought to the attention of Secretary of War Root, he expressed himself as warmly in favor of the idea, but seemed disinclined to become the responsible director of the details to carry it into effect. This objection was a reasonable one, but with the creation of a joint commission outlined in the resolution to take charge of the exercises, the secretary would share the honors with the commission without incurring the labor of preparation. Considerable interest is manifested in the anniversary in the lake region, where the importance of Sault Ste. Marie canal is well understood.

Collision—Tugs Maneuvering Near Pier—Absence of Lookouts.—A tug was backing out from a slip in East river with a scow on a line, when, drifting up stream slightly with the flood tide, she came in collision with another tug which was maneuvering in the vicinity, and was at the time headed down the river, and going ahead slightly. Neither tug had a lookout. The first tug took no precautions whatever with respect to any other vessels as she moved out, and the second tug made no effort to avoid the collision, which she could readily have done had she been vigilant. Held, that the tugs were both in fault. *The O. L. Halenbeck*, 112 Fed. Rep. (U. S.) 159.

WINTER MOORINGS.

A 32-page booklet showing where about 2,000 vessels are laid up for the winter. It gives steamers, schooners and barges and a list of tugs as well as a list of the vessels which were lost last season and is quite reliable, being taken from correspondence at the various lake ports. Copies sent by mail prepaid on receipt of 25c. *The MARINE RECORD Publishing Co., Western Reserve Bldg., Cleveland, Ohio.*

DULUTH TO QUEBEC.

All reports from the new Quebec lake line are to the effect that no ordinary effort is to be made this time. There will be no stopping off with three or four steamers, but the list may be swelled to twenty or thirty in case they can be obtained at a favorable price. There will be none of the old-style stopping to lighter at Port Colborne, but in all cases vessels secured will be of sufficiently light draft to make the trip without breaking bulk. At first thought it would seem difficult to secure such fleet, but it has already been found that steamers of the required size are plenty enough. Pages of names are shown, all backed by letters offering them at various rates. All that will be required is that they can make the trip and carry grain and package freight. There will be no preference for steamers with gangways, as it is said that the tide is so high at Quebec that they could not be used much anyhow. All cargo will be worked by the hatchways. As to insurance, it is said that the combined rates will be less on account of sending the smaller steamer from Montreal to Quebec instead of the ocean tramp or liner, and the accidents will be less than they have been lately as soon as the route is better known.

Admiralty—Amendment of Libel—Conformity to Mandate on Reversal.—A decree of a court of admiralty awarding damages for injury to a vessel in favor of an underwriter which had paid insurance on account of such injury was reversed on appeal because it appeared from the libel that the damages caused by the injury exceeded the amount of insurance paid, and that libellant could not split the cause of action, and maintain a suit to recover a portion only of such damages. In its opinion the appellate court stated that on the return of the record to the district court it would be open to libellant "to mend its libel and show, if it can, that the excess of damages over the sum for which it sues has been paid, released, or otherwise extinguished, so that claimants are no longer liable therefor at the suit of any one." After the case was remanded the libel was amended by the addition of an allegation that the only party in interest except the libellant was the company owning the injured vessel, which had authorized libellant to file the libel and collect the amount of insurance paid, and that the company made no further claim for damages. In support of such averment libellant offered in evidence a release executed by such company pursuant to a resolution of its board of directors, but after the cause was remanded, and which released any claim for damages beyond those sued for libellant. Held, that such amendment, and the evidence in support thereof, conformed to the requirements of the mandate, by showing that at the time the libel was filed libellant was the only party in interest asserting any claim, and that the claimants were fully protected against a second suit, and entitled libellant to maintain the suit to recover its own damages. *Fairgrieve et al., vs. Marine Ins. Co., Limited*, of London, 112 Fed. Rep. (U. S.) 364.

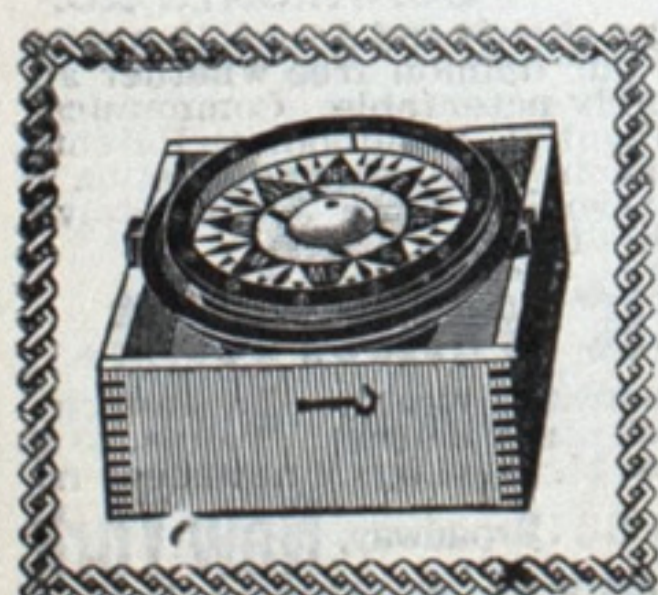


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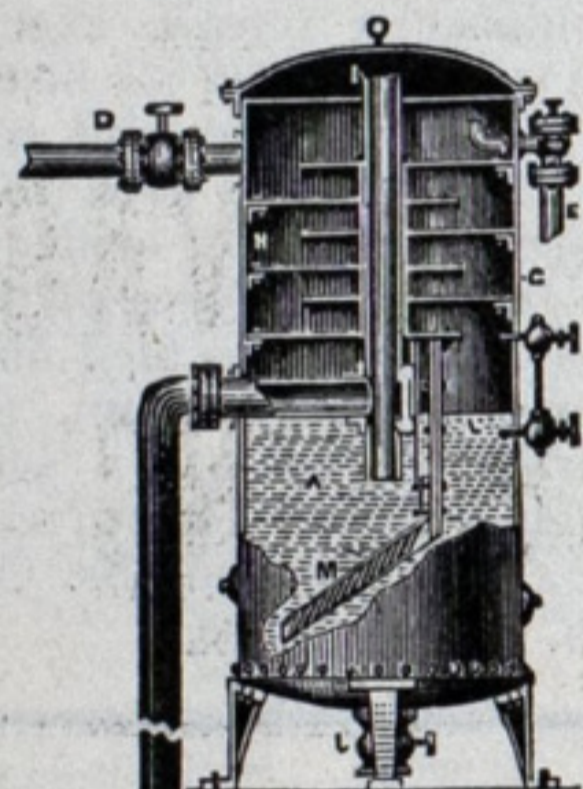
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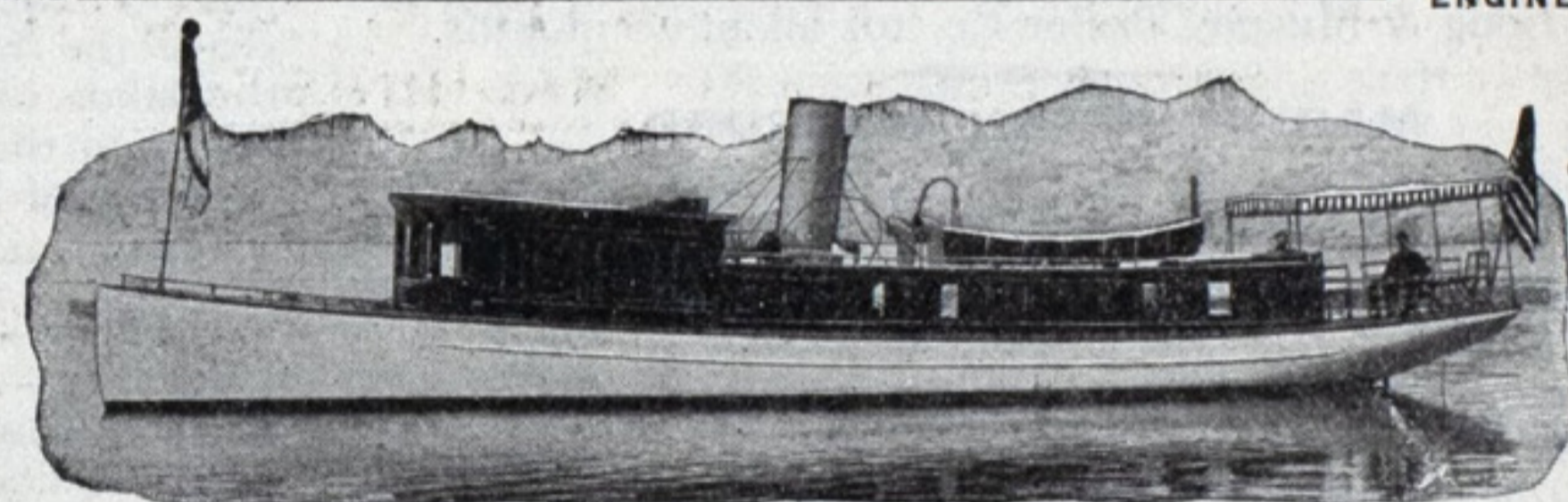
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REPORTED BY THE LOOKOUT.

The National Association of Marine Engineers have elected the following officers: Grand President, T. J. S. Milne, Kingston; secretary-treasurer, J. A. Morrison, St. John; conductor, F. S. Henning, Toronto; doorkeeper, S. Beatty, Collingwood; auditors, Robert Craig and Bro. Gillie, Kingston.

The matter of invading some of the ports is being considered by the Independent Towing Co., at the head of which is L. S. Sullivan, of this city, says the Toledo Blade. It is said that the Independent has deals pending for some large tugs, which it intends to place in ports which are now entirely controlled by the Great Lakes Towing Co. Arrangements have already been completed for an additional tug at Buffalo, the Delta, which was purchased at Cleveland last fall, will be added to the company's fleet at that port. She is being overhauled at a cost of \$3,500, and the other tugs, the Butler and the Pallister, are being put into excellent condition.

The steel steamer Etruria, built on the order of the Hawgood Transit Co., Cleveland, was launched from the yards at West Bay City, Saturday. She measures 434 feet over all; 414 feet keel, 50 feet beam; and is 28 feet deep. She will have triple expansion engines with cylinders 22x35x58 inches, and with a 42-inch stroke. The launching of this boat marks the beginning of the rehabilitation of the Hawgood fleet, and also practically the re-entrance of the company into the lake business. The new steamer will have Capt. Thomas C. Ellis as her master, and R. B. Buchanan, of Cincinnati, as her chief engineer. Capt. Ellis is one of the old mariners of the lakes, and has seen much service.

The cost of the work to be done at the Milwaukee shipyards this winter is increased by nearly \$100,000, by the expense of the repairs on the two Pere Marquette boats which went aground during the winter at Ludington. The total cost of the grounding of the car ferry was estimated at the time as being about \$50,000, including the wrecking expenses. The ferry is now in the south drydock, being put in shape for service at the earliest possible date. Her hull will be repaired and she will then leave the dock to make room for other vessels. The No. 3 was towed across from

Ludington Friday, and she will go into drydock for immediate repairs. The decision of the owners of the Mary E. Boyce, to remodel that steamer will bring the additional work to be done here to \$100,000 above the estimate made early in the winter.

Marine men agree that Eagle river is the place for the new life-saving station and not Eagle harbor, says the Houghton Mining Gazette. In a letter to that paper, Blight & Son, of Eagle river, say that the steamers Hudson and Fern went down off Eagle river, and not in Eagle harbor, as has been so many times reported. Also the Colorado and Pickands struck the reef in a fog at that place and went to pieces. The little steamer Fern was getting out the iron from the Colorado and the Pickands when a storm came up and she could not get away. No vessel can strike the reef at Eagle Harbor unless it runs on the beach. At Eagle river the reef is about one mile from shore and extends from Five-Mile point to Sand Bay, and in some places has only four feet of water over it. Eagle harbor and Eagle river are nine miles apart.

The Milwaukee Evening Wisconsin says: An opinion of much interest to vessel owners was handed down by Judge Seaman, in the federal court to-day, wherein the court holds that continuing secret liens upon vessels tend to incumber commerce, and cannot be encouraged. Because Mrs. Anna Wagner, cook of the steamer Toxteth, permitted her claim for wages as cook to run over two seasons, the court disallows the claim for services for those years, cutting down the claim from \$210.67 to 43.33. Mrs. Wagner was the wife of the master and managing owner of the schooner. The Toxteth was a pleasure yacht, and was brought to Milwaukee last June, having been chartered by Attorney John F. Burke, for a cruise about the lakes. When she reached Milwaukee she was seized by the marshal, and sold at auction. Mrs. Wagner filed claim for services at the rate of \$20 per month, for services of 1899, 1900, and 1901. Judge Seaman says she allowed her claim to run, and gave no public intimation of her claim, and her action comes within the ban of the rule that secret liens must be discouraged when their allowance will take the fund from bona fide lien holders. Mrs. Wagner's claim for services rendered in 1901 is allowed.

Government Proposals.

U. S. ENGINEER OFFICE, Buffalo, N. Y., February 1, 1902. Sealed proposals for removal of wreck in harbor at Buffalo, N. Y., will be received here until 11 a. m., March 4, 1902, and then opened. Information furnished on application. T. W. Symons, Major Engineers. 6-9

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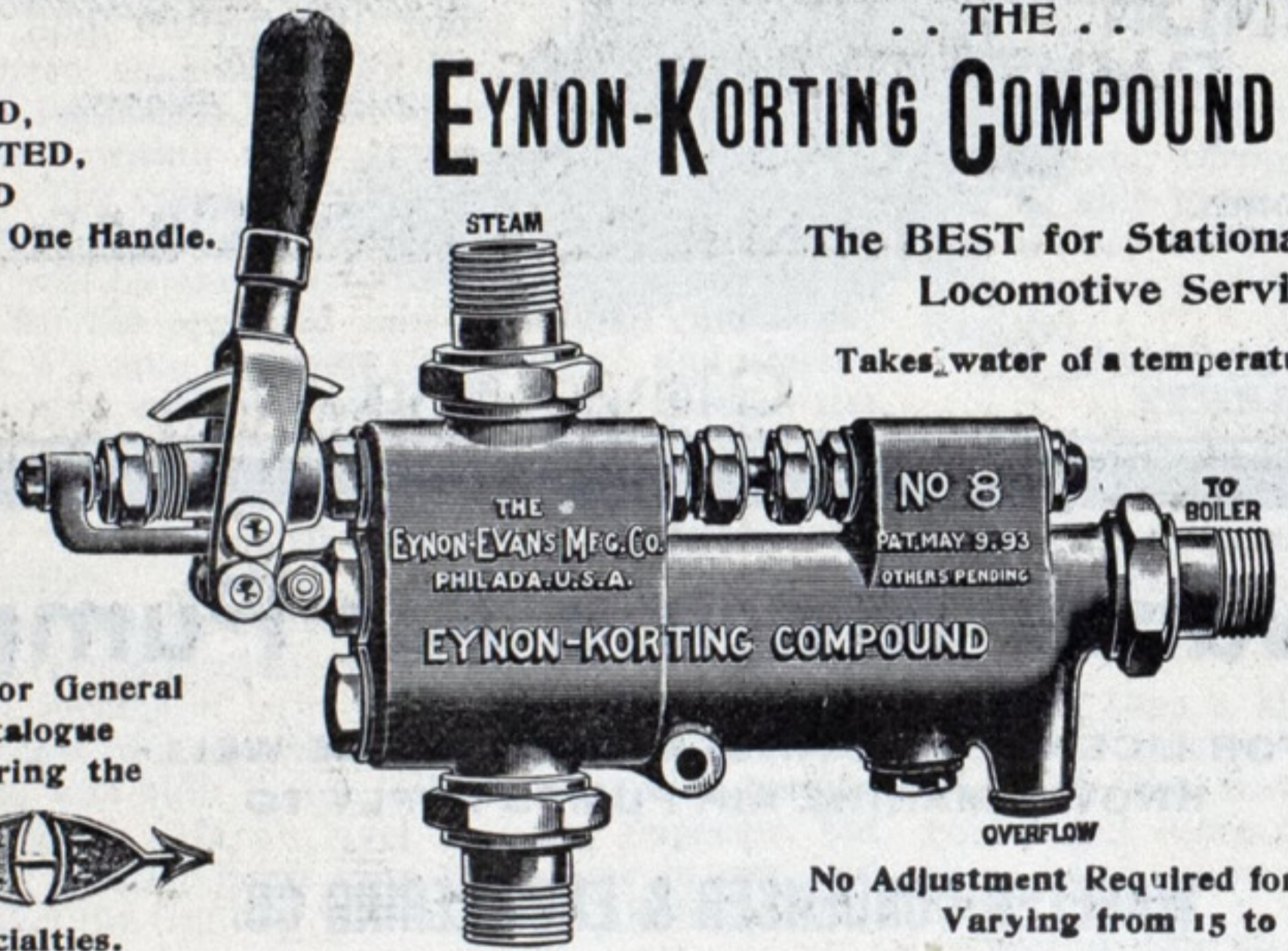
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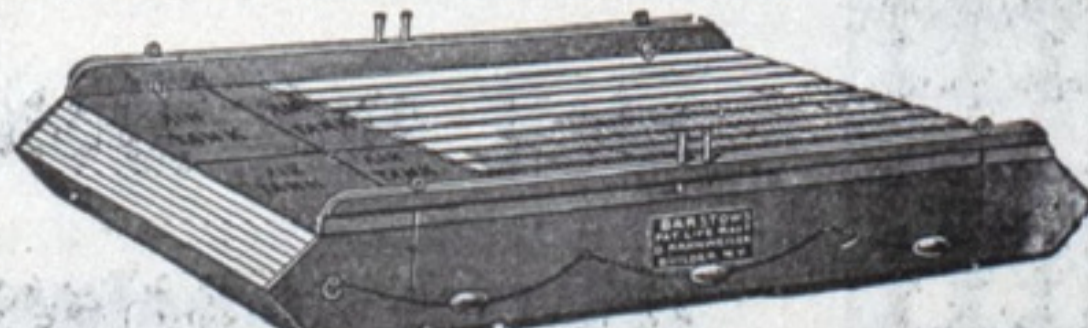
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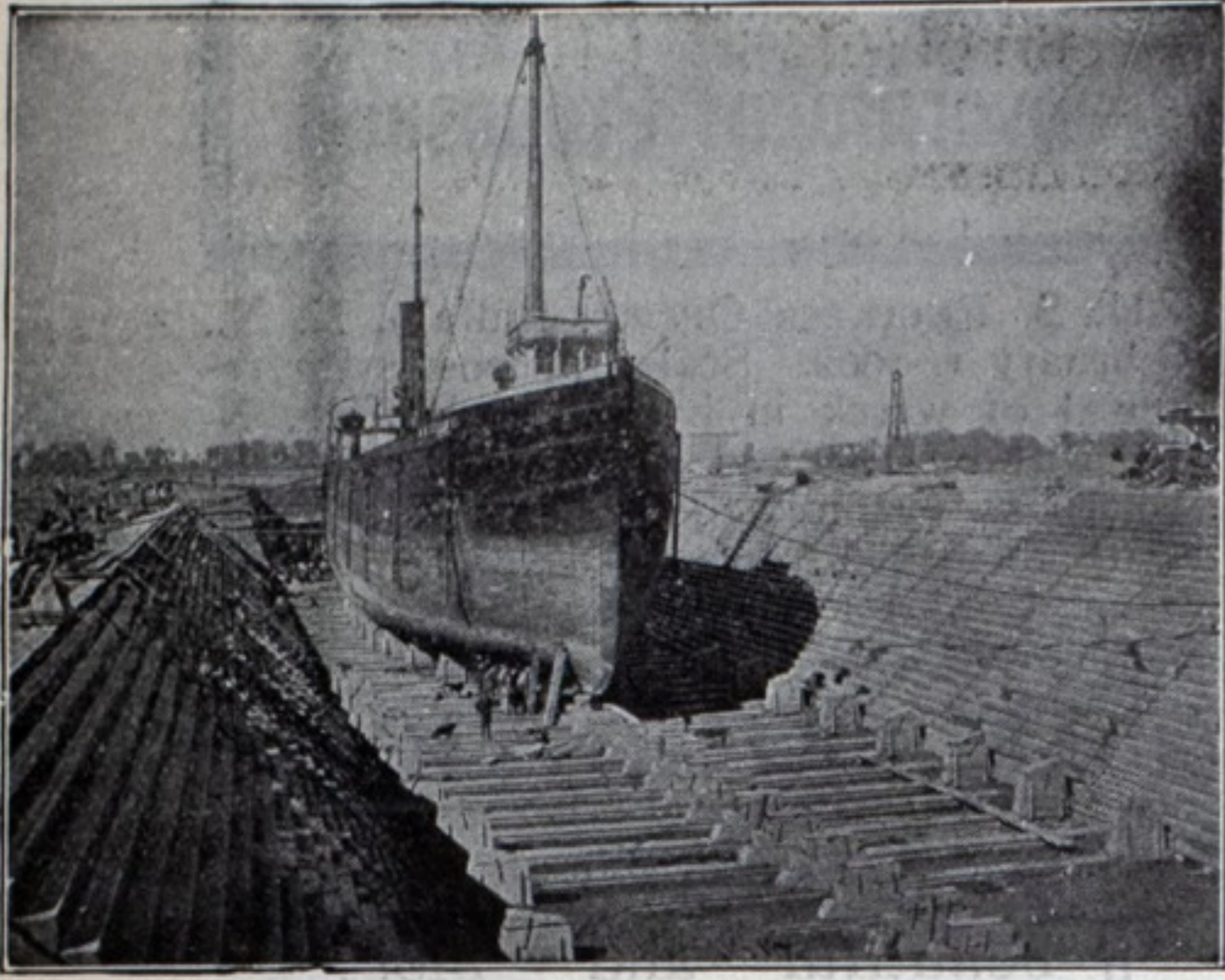


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